

# **Federal Railroad Administration**



## **Track and Rail and Infrastructure Integrity Compliance Manual**

**Volume III Railroad Workplace Safety  
Chapter 3 Roadway Worker Protection**

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**Text in italic font of this manual is regulatory language, whereas indented paragraphs provide field guidance for FRA inspectors. Indented paragraphs are not to be construed as regulatory language in any manner.**

## CHAPTER 3 Roadway Worker Protection

### **Introduction**

This chapter is based upon the Final Rule on Railroad Roadway Worker Protection issued by FRA on December 16, 1996.

The Roadway Worker Protection Rule is issued by FRA as Subpart C to 49 CFR 214. Railroad Workplace Safety. Subpart A of that part contains the general provisions and definitions, and Subpart B is the Bridge Worker Safety Rule. This chapter addresses all of Subpart C, and those parts of Subpart A that are affected or changed by this rulemaking.

FRA will have a major role in reviewing the on-track safety programs of all railroads, and it will be necessary for inspectors and specialists to understand the rule and its application. This preliminary document is therefore intended to fill this need.

### **Summary:**

The Roadway Worker Protection Rule requires railroads and contractors to railroads to devise and adopt procedures to prevent their roadway worker employees being struck by trains and other on-track machinery. The Rule also requires roadway workers to follow the on-track safety procedures in order to protect themselves and others dependent upon them. Each railroad employer is required to have in place an on-track safety program, including rules, procedures, training and equipment, to be used for the protection of roadway workers. That program is subject to critical review by FRA.

### **Principles:**

The rule is based upon a few very elemental principles:

1. A person who is not fouling a track will not be struck by a train.
2. A person who is fouling a track upon which a train will not move will not be struck by a train.
3. No person should foul a track unless that person knows either that:
  - a. No train will arrive, or
  - b. The person on the track will be able to move to a place of safety before a train arrives.
4. Each roadway worker bears the ultimate responsibility for his own on-track safety.
5. Each employer is responsible for providing the means for achieving on-track safety to each roadway worker employee.

### **Railroad On-track Safety Programs:**

Each railroad is required to adopt and implement program that will afford on-track safety to all roadway workers performing duties on that railroad. FRA will review each railroad's on-track safety plan. FRA review and approval is not necessary before the program is implemented, but the railroad is responsible for having a complying plan regardless of FRA review.

Every railroad on-track safety program should include the following components:

1. Documentation.
  - a. Operating rules.

- b. Safety rules.
  - c. Established procedures.
  - d. Required records.
- 2. Training.
  - 3. Communication.
  - 4. Action.
  - 5. Internal monitoring.

The regulation calls for each of these provisions. Each railroad has considerable latitude in the implementation of the provisions, within the requirements of the regulation. The intent of the regulation is to have each railroad cover the required points, and adapt them to the operating situation of the railroad. Certain points should be noted when reviewing a railroad's on-track safety program, which are discussed in the following paragraphs.

### ***Documentation of On-track Safety Programs:***

The Paperwork Reduction Act of 1995 requires that the documentation requirements of any regulation must be kept to the absolute minimum necessary to accomplish the objective of the regulation. The documentation requirements of this regulation are considered to be necessary for a railroad or an employer to properly perform the duties which the regulation requires.

The Advisory Committee agreed on one fundamental principle with respect to operating rules, safety rules and established procedures, which is reflected in the regulation. That principle calls for a roadway worker to have one well-known reference to all the information needed to work according to the railroad's on-track safety program. A roadway worker should be able to turn to one location in one book to begin a reference to all on-track rules and procedures.

That does not mean that all the material must be found in that section of the book. Certain operating rules, special instructions, timetables and similar documents will necessarily be published in separate documents. The On-Track Safety program manual should have clear references to those documents wherever they have a bearing on on-track safety procedures. The manner in which they affect on-track safety procedures should also be clearly stated.

The program documents must include the written procedure by which the employer will resolve challenges of on-track safety procedures made by employees under 214.311 and 214.313.

The regulation requires that certain actions and items of information be recorded. A checklist follows:

§ 214.309 - On-track safety program documents - The fundamental document discussed above.

§ 214.321 - Exclusive track occupancy.

§ 214.321(b) (1) and (b) (2) - Written authority for track occupancy held by roadway worker in charge of working limits.

§ 214.321(b)(3) - Written record of authority for track occupancy maintained by train dispatcher or control operator.

§ 214.335(f) - Statement of On-track Safety prepared by each lone worker before fouling a track,

§ 214.341 - Records of training and qualification of all employees designated as roadway workers.

§ 214.351 - Recorded examination of training and qualification of roadway workers who provide on-track safety for members of roadway work groups.

### ***Program Review by FRA:***

Section 214.307 requires that employers notify FRA when their on-track safety programs are ready for review by FRA. The review will normally occur at the railroad's headquarters, or at another location on the railroad's property. The discussion under § 214.307 explains the intent of this section.

When FRA is notified that an on-track safety program is effective, the Office of Safety Assurance and Compliance will direct the appropriate FRA Regional Administrator (RA) to conduct the program review for that railroad. The RA will designate the regional staff personnel who will perform or assist in the review, and will arrange with the person designated by the railroad for a suitable time and place to begin.

Every encouragement should be given to railroads to provide the opportunity for roadway workers or their designated representatives to participate in the program review. The section analysis of § 214.307 notes as strongly as possible that willing cooperation is essential to the success of any on-track safety program. Early involvement of employees and their representatives in the design and review of an on-track safety program will contribute to its success. In any event, employee representatives have the right to express any differences with a program to FRA. If those expressions are made during the review process it is more likely that they can be addressed before the railroad has fully committed to its on-track safety program. If the differences arise from a misunderstanding, that issue can also be addressed before the misunderstanding becomes widespread.

The review process should be informal and open. The designated railroad personnel, the employee representatives if invited by the railroad, and the FRA representatives should read and discuss the program manual. They should give particular attention to connections made between the procedures called for in the manual, and the particular operating rules that are involved in those procedures. It is not necessary that the railroad submit any documentation to FRA before or during the review process, but it might be convenient for all concerned if the manuals can be reviewed before the review session.

Any concerns or questions held by FRA reviewers should be presented as soon as they arise to the railroad representatives. The concerns and questions, and the response or explanation provided by the railroad, should be noted in the report of the review. Within two weeks of the conclusion of the review, the RA should submit a memo of the results of the review to the Director, Office of Safety Analysis and Compliance, Office of Safety.

The memo should include a recommendation for approval or disapproval, any reasons behind a recommendation for disapproval, and a fair characterization of the railroad's on-track safety program. Approval or disapproval will be determined by the Associate Administrator for Safety.

It is anticipated that many smaller railroads will adopt the appropriate features of a common program that is being devised by the American Short Line Railroad Association. That program will be reviewed in general by FRA Headquarters, and that information will be provided after that general review. When such a program is adopted by a railroad, the issues to be determined will be whether the program provisions are appropriate to the individual railroad, the manner in which they are issued, and the degree with which personnel are familiar with their implementation.

## Section Analysis of the Roadway Worker Protection Rule

### **§ 214.301 Purpose and scope.**

- (a) *The purpose of this subpart is to prevent accidents and casualties caused by moving railroad cars, locomotives or roadway maintenance machines striking roadway workers or roadway maintenance machines.*
- (b) *This subpart prescribes minimum safety standards for roadway workers. Each railroad and railroad contractor may prescribe additional or more stringent operating rules, safety rules, and other special instructions that are consistent with this subpart.*
- (c) *This subpart prescribes safety standards related to the movement of roadway maintenance machines where such movements affect the safety of roadway workers. This subpart does not otherwise affect movements of roadway maintenance machines that are conducted under the authority of a train dispatcher, a control operator, or the operating rules of the railroad.*

**Guidance.** Section 214.301 states the purpose for the minimum standards required under this subpart to protect roadway workers. Railroads can adopt more stringent standards as long as they are in accordance with this subpart.

Paragraph (c) defines the scope of the rule as applying to the protection of individual roadway workers from being struck by roadway maintenance machines, but not applying to the manner in which roadway maintenance machines are protected from trains and each other by the operating rules of a railroad.

### **§ 214.302 Information Collection Requirements.**

- (a) *The information collection requirements of this part were reviewed by the Office of Management and Budget pursuant to the Paperwork Reduction Act of 1995, Public Law 104-13, § 2, 109 Stat. 163 (1995) (codified as revised at 44 U.S.C. §§ 3501-3520), and are assigned OMB control number 2130-0539. FRA may not conduct or sponsor and a respondent is not required to respond to, a collection of information unless it displays a currently valid OMB control number.*
- (b) *The information collection requirements are found in the following sections: §§ 214.303, 214.307, 214.309, 214.311, 214.313, 214.315, 214.319, 214.321, 214.323, 214.325, 214.327, 214.329, 214.331, 214.335, 214.341.*

**Guidance.** This section is required by the Paperwork Reduction Act of 1995, cited in the section. It was mislabeled as Information and Collection Requirements in the final rule, and will be corrected to Information Collection Requirements in a subsequent amendment.

### **§ 214.303 Railroad on-track safety programs, generally.**

- (a) *Each railroad to which this part applies shall adopt and implement a program that will afford on-track safety to all roadway workers whose duties are performed on that railroad. Each such program shall provide for the levels of protection specified in this subpart.*
- (b) *Each on-track safety program adopted to comply with this part shall include procedures to be used by each railroad for monitoring effectiveness of and compliance with the program.*

**Guidance.** Section 214.303 gives the general requirement that railroads shall adopt and implement their own program for on-track safety, which meets Federal minimum standards. Rather than implement a “command and control” rule, FRA decided to establish the parameters for such a program and defer to the expertise of each individual railroad to adopt a suitable on-track safety program for their railroad, in accordance with these parameters. FRA felt that establishing an internal monitoring process to determine compliance and effectiveness would be a necessary component of any On-Track Safety Program. Consequently, each railroad must incorporate an internal monitoring process as a component of its individual program. It should be noted that this internal monitoring will not replace FRA's inspection and monitoring efforts for compliance with this subpart.

### **§ 214.305 Compliance Dates**

*Each program adopted by a railroad shall comply not later than the date specified in the following schedule:*

- (a) For each Class I railroad (including National Railroad Passenger Corporation) and each railroad providing commuter service in a metropolitan or suburban area, March 15, 1997.*
- (b) For each Class II railroad, April 15, 1997.*
- (c) For each Class III railroad, switching and terminal railroad, and any railroad not otherwise classified, May 15, 1997.*
- (d) For each railroad commencing operations after the pertinent date specified in this section, the date on which operations commence.*

**Guidance.** Section 214.305 establishes the dates upon which the different classes of railroads must comply with the rule. FRA believes that staggering effective dates allows the largest number of workers who are exposed to the highest level of risk to benefit from the On-Track Safety Program first. FRA hopes to be able to expedite the review process, as the smallest number of individual programs will be put in place by the major carriers. After this initial phase of reviews for Class I railroads, FRA will have established review policies and resolved many recurrent issues, making the larger number of reviews for smaller railroads more efficient. The experience gained through the initial phase of the review process will contribute to the next and larger phase of reviews. Although the rule formally establishes a later required effective date on smaller railroads, this would not prevent smaller railroads from implementing their programs sooner.

The Preamble of the Final Rule of December 16, 1996, also states:

**Dates:** Effective Dates: This rule is effective January 15, 1997. Each railroad must notify the FRA not less than 30 days before their respective date for compliance. Each railroad must be in compliance with this rule no later than the date specified in the following schedule: For each Class I railroad (including National Railroad Passenger Corporation) and each railroad providing commuter service in a metropolitan or suburban area, March 15, 1997; For each and any railroad not otherwise classified, May 15, 1997; For each railroad commencing operations after the pertinent date specified in this paragraph, the date on which operations commence.



**§ 214.307 Review and approval of individual on-track safety programs by FRA.**

- (a) *Each railroad shall notify, in writing, the Associate Administrator for Safety, Federal Railroad Administration, RRS-15, 400 Seventh Street SW, Washington, DC 20590, not less than one month before its on-track safety program becomes effective. The notification shall include the effective date of the program, the address of the office at which the program documents are available for review and photocopying by representatives of the Federal Railroad Administrator, and the name, title, address and telephone number of the primary person to be contacted with regard to review of the program. This notification procedure shall also apply to subsequent changes to a railroad's on-track safety program.*
- (b) *After receipt of the notification from the railroad, the Federal Railroad Administration will conduct a formal review of the on-track safety program. The Federal Railroad Administration will notify the primary railroad contact person of the results of the review, in writing, whether the on-track safety program or changes to the program have been approved by the Administrator, and if not approved, the specific points in which the program or changes are deficient.*
- (c) *A railroad's on-track safety program will take effect by the established compliance dates in § 214.305, without regard to the date of review or approval by the Federal Railroad Administration. Changes to a railroad's program will take effect on dates established by each railroad without regard to the date of review and approval by the Federal Railroad Administration.*

**Guidance.** Section 214.307 specifies the process for review and approval of each railroad's on-track safety program by FRA. The intent of the review and approval is to be constructive, rather than restrictive. FRA prefers that a review of each program take place at the railroad because an open discussion of the program would be beneficial to all concerned. The effective date of a railroad's program will not be delayed by FRA's scheduling of a review, or granting approval. The railroad will be responsible for compliance with this rule regardless of FRA review or approval of its program.

Likewise, a railroad may amend its program following FRA approval without prior approval of the amendment from FRA. Of course, should FRA later disapprove the amendment, the program would have to be changed to secure FRA's approval. The railroad will still be responsible for compliance with this rule, and subject to compliance monitoring and enforcement by FRA. FRA will make every effort, when requested, to provide a timely review of a program or amendment before its effective date, and to assist in any manner possible to enhance the on-track safety afforded to roadway workers.

Contractors will be required to conform to the on-track safety programs on the railroads upon which they are working. Contractors whose employees are working under a railroad's approved on-track safety program need not submit a separate on-track safety program to FRA for review and approval.

Some contractors operate highly specialized equipment on various railroads on a regular basis. That equipment might require special methods to provide on-track safety for railroad and contractor employees. Such a special method will require a clear and reasonable way to mesh with the on-track safety programs of the railroads upon which the equipment is operated.

The rule does not specifically call for the involvement of employees or their representatives in the program design or review process, because the responsibility for the program's

compliance with this rule lies with the employer. However, it should be noted that this rule itself is the product of a successful proceeding in which management, employee representatives and the Federal government were fully involved from the beginning. That fact should be an encouragement to all concerned to realize that the success of an on-track safety program will require the willing cooperation of all persons whose duties or personal safety are affected by the program.

### **§ 214.309 On-track safety program documents.**

*Rules and operating procedures governing track occupancy and protection shall be maintained together in one manual and be readily available to all roadway workers. Each roadway worker responsible for the on-track safety of others, and each lone worker, shall be provided with and shall maintain a copy of the program document.*

**Guidance.** Section 214.309 specifies the type of on-track safety manual each railroad must have. Essentially, the railroad must have all on-track safety rules in one place, easily accessible to roadway workers. This provision is intended to provide the roadway worker with a single resource to consult for on-track safety, to avoid fragmentation of the rules and the ultimate dilution of their vital message.

The regulation does not specify how a railroad is to provide one manual encompassing the necessary information and make it readily available. FRA also does not intend that all related operating rules, timetables or special instructions must be reproduced in this manual; however, all rules and operating procedures governing track occupancy protection should be included. Any related publications or documents should be cross-referenced in the On-Track Safety Manual and provided to employees whose duties require them.

The procedures governing the good faith challenge is a subset of this information as these procedures govern any challenges to be made to track occupancy and protection. Thus the rules associated with the Good Faith Challenge found in §214.311(c) and §214.313(d) is considered to be part of the rule and should be contained in the document with the on-track safety manual. Roadway workers need this resource at the work site, in order to execute a challenge should one arise. This resource can take the form of:

- One document containing on-track safety procedures, good faith challenge, and on-track safety operating rules (absent operating rules not pertaining to on-track safety); or
- A binder system containing all operating rules/special instructions and on-track safety operating rules. The on-track safety procedures and good faith challenge can be a section or tab of this resource.

Section 214.309 establishes the responsibility of the employer to provide the on-track safety program document to all employees who are responsible for the on-track safety of others, and those who are responsible for their own on-track safety as lone workers. Roadway workers who provide on-track safety for others must have the manual at the work site for easy reference. FRA recognizes that the on-track safety document may be of various sizes. As such, “readily available” at the work site for a roadway workgroup would include having the manual in a vehicle, roadway maintenance machine, with the roadway worker who provides on-track safety, etc.

Lone workers must also have this manual easily available to them including track inspectors or signal maintainers, who may be walking track. FRA does not intend that an individual should have this manual on his or her person while performing work, but to have the

appropriate sections available and readily accessible to all roadway workers at the work site. Readily available for a lone worker means the document may be on their person, in a vehicle, yard office, workshop, etc.

Railroads issue changes to on-track safety programs by the use of bulletins and notices. The changes can be in effect for a considerable period of time before being incorporated into the on track safety field manual. All changes to on-track safety procedures and rules governing track occupancy must be made a part of the on-track safety field manual and readily available to roadway workers, as soon as they are effective. These changes may be temporarily incorporated into the field manual, perhaps through incorporation of bulletins and general orders, and made readily available to all roadway workers. The Federal Railroad Administration (FRA) expects that any changes to the on-track safety program carried on bulletin or general orders would be permanently included in new printings of the field manual.

An employer, such as a contractor, whose roadway workers work on another employer's railroad, will usually adopt and issue the on-track safety manual of that railroad for use by their employees. It will be the employer's responsibility to provide the manual to its employees who are required to have it and to know that each of its employees is knowledgeable about its contents.

The manual must be at the work site available for reference by all roadway workers. Many roadway workers will not be responsible for providing protection for themselves or others, but still must comply with the rules. All employees have a responsibility to remain at a safe distance from the track unless they are assured that adequate protection is provided. Although not responsible for providing protection for others, they must be familiar with the rules to determine whether adequate protection is provided and have the rules readily available if it is necessary to consult them.

### **§ 214.311 Responsibility of Employers.**

- (a) *Each employer is responsible for the understanding and compliance by its employees with its rules and the requirements of this part.*
- (b) *Each employer shall guarantee each employee the absolute right to challenge in good faith whether the on-track safety procedures to be applied at the job location comply with the rules of the operating railroad, and to remain clear of the track until the challenge is resolved.*
- (c) *Each employer shall have in place a written procedure to achieve prompt and equitable resolution of challenges made in accordance with §§ 214.311(b) and 214.313(d).*

**Guidance.** Section 214.311 addresses the employer's responsibility in this rule. This section applies to all employers of roadway workers. Employers may be railroads, contractors to railroads, or railroads whose employees are working on other railroads. Although most on-track safety programs will be implemented by railroads rather than contractors, the employer is responsible to its employees to provide them with the means of achieving on-track safety.

Railroads are specifically required by § 214.303 to implement their own on-track safety programs. Section 214.311 however, places responsibility with all employers (whether they are railroads or contractors) to see that employees are trained and supervised to work with the on-track safety rules in effect at the work site. The actual training and supervision of

contractor employees might be undertaken by the operating railroad, but the responsibility to see that it is done rests with the employer.

The guarantee required in paragraph (b) of an employee's absolute right to challenge on-track safety rules compliance will be a required part of each railroad's on-track safety program, as will be the process for resolution of such challenges. On-track safety depends upon the faithful and intelligent discharge of duty by all persons who protect or are protected by it. Any roadway worker who is in doubt concerning the on-track safety provisions being applied at the job location should resolve that uncertainty immediately.

The term at the job location is not meant to restrict who can raise an issue or where an issue can be raised. Rather, the challenge must address the on-track safety procedures being applied at a particular job location.

A fundamental principle of on-track safety is that a roadway worker who is not entirely certain that it is safe to be on the track should not be there. A discrepancy might be critical to the safety of others, and the first roadway worker who detects it should take the necessary action to provide for the safety of all.

The Advisory Committee used the term No-Fault Right in its report to describe the absolute right of each employee to challenge, without censure, punishment, harm or loss, the on-track safety compliance expressed in paragraph (b) of this section. A challenge must be made in good faith in order to fall within the purview of this rule. A good faith challenge would trigger the resolution process called for in paragraph (c).

The initiation of a challenge by one or more roadway workers in a work group regarding the on-track safety procedures provided may not necessitate all of the workers in the group clearing the track. The guarantee required in paragraph (b) gives every roadway worker the absolute right to challenge on-track safety rules. The good faith challenge process and the means for resolution of such challenges are required parts of every employer's on-track safety program. On-track safety depends upon the faithful and intelligent discharge of duty by all persons who provide protection or are protected under it. Any roadway worker who is in doubt concerning the on-track safety provisions being applied at the job location should act to resolve that uncertainty immediately. Although a fundamental principle of on-track safety is that any roadway worker who is not entirely certain that it is safe to be on the track should not be there, the rule does not require that all roadway workers clear the track whenever a challenge is made. They have the right to do so, but the Roadway Worker in Charge (RWIC) is not specifically obligated to shut down the work while the challenge is resolved. However, if the challenge is found valid, and if the RWIC has improperly placed persons in a hazardous situation after having been notified of the error, the RWIC or the employer may be in violation of section 214.311 (responsibility of employers).

The written process to resolve challenges found in paragraph (c) is intended to provide a prompt and equitable resolution of these concerns. This is necessary in order that any problems that arise regarding on-track safety should be resolved and that any possible lapses in safety are quickly corrected.

The resolution process should include provisions to permit determination by all parties as to the safe, effective application of the on-track safety rule(s) being challenged at the lowest level possible, and for successive levels of review in the event of inability to resolve a concern at lower levels. FRA believes it best for employers, consulting with employees and their representatives where applicable, to write effective processes to accomplish these objectives.

A railroad's on-track safety program will be reviewed and approved in accordance with § 214.307(b). FRA will consider this written process during its review and approval of the overall on-track safety submission. FRA will consider whether the written processes afford a prompt and equitable resolution to concerns asserted in good faith and their effectiveness in promoting the intelligent, reasoned application of the on-track safety principles.

#### **§ 214.313 Responsibility of Individual Roadway Workers.**

- (a) Each roadway worker is responsible for following the on-track safety rules of the railroad upon which the roadway worker is located.*
- (b) A roadway worker shall not foul a track except when necessary for the performance of duty.*
- (c) Each roadway worker is responsible to ascertain that on-track safety is being provided before fouling a track.*
- (d) Each roadway worker may refuse any directive to violate an on-track safety rule, and shall inform the employer in accordance with § 214.311 whenever the roadway worker makes a good faith determination that on-track safety provisions to be applied at the job location do not comply with the rules of the operating railroad.*

**Guidance.** Section 214.313 addresses the individual responsibility of each roadway worker. Each roadway worker has a responsibility to comply with this subpart which is enforceable under the provisions of individual liability. Paragraph (a) requires that each roadway worker follow the railroad's on-track safety rules. Paragraph (b) prohibits roadway workers from fouling a track unnecessarily. It is FRA's opinion, as well as that of the Advisory Committee, that roadway workers should under no circumstances foul a track unless it is necessary to accomplish their duties.

A reference to the definition of fouling a track is useful to understand when protection is required. Fouling a track describes the circumstance in which a person is in danger of being struck by a moving train.

Under paragraphs (c) and (d), each roadway worker has the responsibility to know that on-track safety is being provided before actually fouling a track, and to remain clear of the track and inform the employer when the required level of protection is not provided. If a roadway worker is not sure that sufficient on-track safety is being provided, he or she can satisfy paragraph (c) by simply not fouling the track.

It is a roadway worker's responsibility to advise the employer of exceptions taken to the application of a railroad's rules, or provisions of this subpart, in accordance with paragraph (d). Employees must approach this responsibility in good faith. Essentially an employee must have honest concerns whether the on-track safety procedures being used provide the necessary level of safety in accordance with the rules of the operating railroad. Furthermore, employees must be able to articulate those concerns in order to invoke the resolution process of the railroad. Initiating an action under the resolution process, absent a good faith concern regarding the on-track safety procedures being applied, would not be in compliance with this subpart.

#### **§ 214.315 Supervision and communication.**

- (a) When an employer assigns duties to a roadway worker that call for that employee to foul a track, the employer shall provide the employee with a job briefing that includes information*

*on the means by which on-track safety is to be provided, and instruction on the on-track safety procedures to be followed.*

- (b) A job briefing for on-track safety shall be deemed complete only after the roadway worker has acknowledged understanding of the on-track safety procedures and instructions presented.*
- (c) Every roadway work group whose duties require fouling a track shall have one roadway worker designated by the employer to provide on-track safety for all members of the group. The designated person shall be qualified under the rules of the railroad that conducts train operations on those tracks to provide the protection necessary for on-track safety of each individual in the group. The responsible person may be designated generally, or specifically for a particular work situation.*
- (d) Before any member of a roadway work group fouls a track, the designated person providing on-track safety for the group under paragraph (c) of this section shall inform each roadway worker of the on-track safety procedures to be used and followed during the performance of the work at that time and location. Each roadway worker shall again be so informed at any time the on-track safety procedures change during the work period. Such information shall be given to all roadway workers affected before the change is effective, except in cases of emergency. Any roadway workers who, because of an emergency, cannot be notified in advance shall be immediately warned to leave the fouling space and shall not return to the fouling space until on-track safety is re-established.*
- (e) Each lone worker shall communicate at the beginning of each duty period with a supervisor or another designated employee to receive a job briefing and to advise of his or her planned itinerary and the procedures that he or she intends to use for on-track safety. When communication channels are disabled, the job briefing shall be conducted as soon as possible after the beginning of the work period when communications are restored.*

**Guidance.** Section 214.315 details supervision and communication of on-track safety methods prior to working. Employees must be notified and acknowledge understanding of the on-track safety methods they are to use, prior to commencing duties on or near the track. Paragraphs (a) and (b) establish the duty of notification by the employer and the reciprocal duty of communicating acknowledgment by the employee. These sections essentially require a job briefing to inform all concerned of on-track safety methods at the beginning of each work period. The acknowledgment is an indication by the employee of understanding, or the opportunity to request explanation of any issues that are not understood.

Paragraph (c) requires that an employer designate at least one roadway worker to provide on-track safety while a group is working together. This designation can either be for a specific job or for a particular work situation. This section is vital to the success of any on-track safety program because the mere presence of two or more persons together can be distracting for all persons involved. FRA believes that awareness will be enhanced and confusion limited by requiring railroads to formally designate a responsible person. This designation must be clearly understood by all group members in order to be effective. An individual, such as a foreman, may generally be designated to be responsible for his or her group, but if two groups are working together or roadway workers of different crafts are assisting one another, it is imperative that this formal designation be communicated to and understood by all affected employees.



Usually, the RWIC will provide the briefing to a roadway work group. However, it is acceptable for other responsible employees to provide this briefing in situations where a roadway work group may be located along a considerable distance such as a large scale mechanized production activity.

It is a common practice for two or more separate work groups to utilize the same working limits (and authority). The regulation clearly specifies that only one roadway worker can be in charge (RWIC) of the working limits. However, questions have arisen regarding the required qualifications for the workers providing on-track safety for a second or third roadway work group that may be utilizing the working limits held by the initial RWIC.

When working limits are established as a form of on-track safety, the provisions of §214.319(b) apply, which states: “Only one roadway worker shall have control over working limits on any one segment of track.” Therefore, it is imperative that only one worker have control, even when multiple work groups may be using common working limits. This is necessary to avoid the complications of multiple or confusing instructions to trains and on-track equipment (OTE) that may be entering working limits.

For example, group B has asked and been given permission by the initial RWIC of group A to use their working limits to foul the track. Sharing the working limits would not necessarily require a person with the qualification under §214.353 for group B, depending upon the type of work being performed. This would not be considered overlapping working limits, but group B would conduct its work within the initial RWIC's working limits. Group A, if affected, would receive a second job briefing prior to giving group B permission to occupy the same working limits. Should a member of group B be asked to perform a duty such as a watchman/lookout, then that individual would need to be qualified to perform that function.

It is also important to remember that only one RWIC can control working limits (214.319(b)). In this scenario, it would be RWIC of group A. Should group B require additional on-track safety above and beyond that afforded by the RWIC controlling the working limits (group A), then an equally qualified worker must be present with that group to provide any additional or changed on-track safety. For example, group B needs to foul an adjacent track not included in group A's working limits. Sec. 214.315 - Supervision and Communication - is a key element with respect to this discussion:

To summarize the foregoing, when a second work group joins another work group within an existing working limits in a common task, it generally would not be necessary for the second work group to have an employee that has the qualification prescribed by §214.353.

However, if the RWIC of the working limits (group A) calls upon someone from group B that is not engaged in a common task to provide on-track safety for their work group, they must have an employee with the qualification prescribed by §214.353.

Prior to the RWIC who controls the working limits (group A) permitting trains and other on-track equipment (OTE) into the limits; all effected workers must be notified. For example, if the RWIC holding the working limits (group A) directs a train or OTE to move into their limits he or she may ask group B to provide their own on-track safety in the form of train approach warning or flagman (if the work is to continue). If group B does not have a worker qualified to perform flagging or watchman/lookout duties then all workers must vacate the track. If an individual is qualified to act as the flagman or watchman/lookout and all workers determine during a “new” job briefing that one of these types of on-track safety is sufficient, the group can continue to work.

It is also necessary to consider the scenario where an RWIC becomes unavailable or calls upon another individual to establish additional on-track safety such as train approach

warning. Should a qualified RWIC not be available, then the work group must vacate the track. In the event on-track safety conditions change, a new job briefing should be conducted before any worker continues to foul the track.

The forgoing example is based on working limits on controlled track under the provisions of exclusive track occupancy. Therefore, the RWIC of the working limits must direct all movements in accordance with §214.321(d).

Paragraph (d) explains the duties of the roadway worker designated to provide on-track safety for the work group. Before roadway workers foul a track, the designated person must inform each roadway worker in the group of the on-track safety methods to be used at that time and location. Essentially, the designated person must conduct an on-track safety briefing prior to the beginning of work on or near the track. This briefing might also fulfill the requirements of paragraph (a) of this section.

Before changing on-track safety methods during a work period, the designated roadway worker must again inform the group of the new methods to be used for their safety. If, for example, roadway workers are working on a track within working limits when the on-track safety method changes to train approach warning, all roadway workers fouling the track must first be informed that trains might approach on that track, and that they will be warned of the approaching train by watchmen/lookouts. They must also know that they can no longer depend on that track as a place of safety when a train approaches.

This provision also establishes methods to be used in the face of unforeseen circumstances. In these emergency situations, where notification of a change in methods cannot be accomplished, an immediate warning to leave the fouling space and not return until on-track safety is reestablished is required.

Given the above duties of the RWIC, it is important that he or she coordinate all on-track safety activities at a work site. This responsibility is an essential element of on-track safety especially when working limits are established and there are activities occurring such as train or on-track equipment movements within the working limits.

The Rule does not specify the location of the RWIC in relation to any work activity where on-track safety has been established or may be established. As such, it may be necessary for a RWIC to depart the work activity for a short period to travel to another area encompassing the same on-track safety (e.g., conduct on-track safety checks throughout a large mechanized production activity). However, during such periods where the RWIC may be away from a work site for short periods, it is imperative the roadway work group have readily available means to communicate with this employee. When a RWIC departs a work site for an extended period, a substitute employee, with the relevant qualifications may be designated. If any exclusive track occupancy authorities are involved, the change in the RWIC designation must be formally addressed in the railroad operating rule procedures.

Paragraph (e) addresses the lone worker. The lone worker must also have a job briefing before fouling the track. This briefing will be slightly different, since the lone worker is not working under direct supervision. At the beginning of the duty period, and prior to fouling the track, the lone worker must communicate with a supervisor or another designated employee to advise of his itinerary and the means by which he plans to protect himself. This briefing should include his geographical location, approximate period of time he is expected to be in this general locality, different locations planned for the day, and the planned method of protection. This paragraph assumes that in accordance with other sections, the lone worker is capable of determining the proper means to achieve his own on-track safety.



The benefits of a lone worker briefing include triggering the lone worker to think about his or her on-track safety, providing a means to inform the railroad where the lone worker will be located during a tour of duty, and providing information (e.g., special instruction changes, etc.) to the lone worker. The regulation does not specify the qualifications that a supervisor or other designated employee must have in order to participate in a briefing with a lone worker. Therefore, in order to ensure the benefits associated with a lone worker briefing, the supervisor or other designated employee should be familiar with railroad operations and on-track safety rules.

This paragraph also provides for emergencies in which the channels of communication are disabled. In those cases, the briefing must be conducted as soon as possible after communication is restored. An interruption in communication does not prevent the lone worker from commencing work. However, since the lone worker will not have described his itinerary and the on-track safety methods to be used in this location to another qualified employee, he must do all that is necessary to maintain the requisite awareness of his surroundings.

### **§ 214.317 On-track safety procedures, generally.**

*Each employer subject to the provisions of this part shall provide on-track safety for roadway workers by adopting a program that contains specific rules for protecting roadway workers that comply with the provisions of §§ 214.319 through 214.337 of this part.*

**Guidance.** Section 214.317 refers to the following sections 214.319 through 214.337 that prescribe several different types of procedures that may be used to achieve on-track safety. It requires employers to use one or more of these types of procedures whenever employees foul a track.

The definition of fouling a track includes a minimum distance limit of four feet from the field, or outer, side of the running rail nearest to the roadway worker. A person could be outside that distance and still be fouling the track under this rule if the person's expected or potential activities or surroundings could cause movement into the space that would be occupied by a train, or if components of a moving train could extend outside the four-foot zone.

Railroad equipment is commonly 10 feet 8 inches wide. Standard track gauge is 4 feet 8-1/2 inches but when adding the nominal width of the rail, the rail spacing can be taken as 5 feet 0 inches for the purposes of this rule. The fouling space would therefore be 13 feet wide (5+4+4 feet).

One exception to the four-foot minimum distance is found in paragraph § 214.341(c) (Roadway maintenance machines) and is discussed in the analysis of that section.

The report of the Advisory Committee includes the statement that "The provisions of restricted speed do not solely provide protection for track equipment, or roadway workers, performing maintenance." The rule does not recognize restricted speed as a sole means of providing on-track safety.

The Advisory Committee also found, and FRA agrees, that although the definitions of "restricted speed" found in this rule and in use throughout the railroad industry provide adequate separation between trains and on-track machines in a traveling mode, a blanket provision that would rely upon restricted speed to protect persons working while fouling the track would not be effective. Individual locations at which unusual circumstances could

result in sufficient protection for roadway workers from trains moving at restricted speed would be addressed by FRA through the waiver process.

### **§ 214.319 Working limits, generally.**

*Working limits established on controlled track shall conform to the provisions of § 214.321*

*Exclusive track occupancy, or § 214.323 Foul time, or § 214.325 Train coordination.*

*Working limits established on non-controlled track shall conform to the provision of § 214.327*

*Inaccessible track. Working limits established under any procedure shall, in addition, conform to the following provisions:*

- (a) Only a roadway worker who is qualified in accordance with § 214.353 of this part shall establish or have control over working limits for the purpose of establishing on-track safety.*
- (b) Only one roadway worker shall have control over working limits on any one segment of track.*
- (c) All affected roadway workers shall be notified before working limits are released for the operation of trains. Working limits shall not be released until all affected roadway workers have either left the track or have been afforded on-track safety through train approach warning in accordance with § 214.329 of this subpart.*

**Guidance.** Working limits is an on-track safety measure which when established eliminates the risk of being struck by trains. Several methods of establishing working limits are found in this subpart. Those methods are distinguished by the method by which trains are authorized to move on a track segment, the physical characteristics of the track, and the operating rules of the railroad.

Paragraphs (a) and (b) specifically refer to the roadway worker who is given control over working limits. These requirements assure that the roadway worker has the requisite knowledge and training, and prevent confusion by giving control to only one qualified roadway worker.

Paragraph (c) provides the restrictions under which trains and roadway maintenance machines will be allowed to operate within working limits. The intent is that the roadway worker in charge will be able to communicate with a train while it is within the working limits, and to control its movement to prevent conflicts between trains, machines and roadway workers.

The requirement that trains move at restricted speed in working limits unless otherwise authorized by the roadway worker in charge is intended as a fail-safe provision to afford the highest level of safety in the absence of authority for higher speed. FRA does not contemplate, nor would it condone, a situation in which a roadway worker could authorize a higher speed for a train than would be otherwise permitted by the operating rules and instructions of the railroad.

Paragraph (d) addresses the procedure when working limits are released. It requires that all affected roadway workers be notified before trains will begin moving over the affected track. They must be either away from the track, or provided with another form of on-track safety.

An example is a work group using a crane to replace rail. Rails are removed from the track, the crane is on the track, and on-track safety is provided by the establishment of working limits. When the rails have been replaced, the crane moves out of the working limits onto another track, the roadway worker in charge stations watchmen/lookouts to provide train

approach warning and notifies all the roadway workers at the work site that train approach warning is now in effect and the working limits are to be released. The roadway worker in charge then releases the working limits to the train dispatcher to permit the movement of trains. The roadway workers at the work site continue to work with hand tools while on-track safety is provided by the watchmen/lookouts.

**§ 214.321 Exclusive track occupancy.**

*Working limits established on controlled track through the use of exclusive track occupancy procedures shall comply with the following requirements:*

- (a) The track within working limits shall be placed under the control of one roadway worker by either:
  - (1) Authority issued to the roadway worker in charge by the train dispatcher or control operator who controls train movements on that track,*
  - (2) Flagmen stationed at each entrance to the track within working limits and instructed by the roadway worker in charge to permit the movement of trains and equipment into the working limits only as permitted by the roadway worker in charge, or*
  - (3) The roadway worker in charge causing fixed signals at each entrance to the working limits to display an aspect indicating ``Stop."**
- (b) An authority for exclusive track occupancy given to the roadway worker in charge of the working limits shall be transmitted on a written or printed document directly, by relay through a designated employee, in a data transmission, or by oral communication, to the roadway worker by the train dispatcher or control operator in charge of the track.
  - (1) Where authority for exclusive track occupancy is transmitted orally, the authority shall be written as received by the roadway worker in charge and repeated to the issuing employee for verification.*
  - (2) The roadway worker in charge of the working limits shall maintain possession of the written or printed authority for exclusive track occupancy while the authority for the working limits is in effect.*
  - (3) The train dispatcher or control operator in charge of the track shall make a written or electronic record of all authorities issued to establish exclusive track occupancy.**
- (c) The extent of working limits established through exclusive track occupancy shall be defined by one of the following physical features clearly identifiable to a locomotive engineer or other person operating a train or railroad equipment:
  - (1) A flagman with instructions and capability to hold all trains and equipment clear of the working limits;*
  - (2) A fixed signal that displays an aspect indicating ``Stop";*
  - (3) A station shown in the time-table, and identified by name with a sign, beyond which train movement is prohibited by train movement authority or the provisions of a direct train control system.*
  - (4) A clearly identifiable milepost sign beyond which train movement is prohibited by train movement authority or the provisions of a direct train control system; or*
  - (5) A clearly identifiable physical location prescribed by the operating rules of the railroad that trains may not pass without proper authority.**

- (d) *Movements of trains and roadway maintenance machines within working limits established through exclusive track occupancy shall be made only under the direction of the roadway worker having control over the working limits. Such movements shall be restricted speed unless a higher speed has been specifically authorized by the roadway worker in charge of the working limits.*

**Guidance.** Section 214.321 prescribes working limits on controlled track as one form of on-track safety allowed in accordance with the provisions of this subpart. Reference to the definitions of Controlled Track and Exclusive Track Occupancy are helpful to the understanding of this section.

Controlled track is track on which trains may not move without authorization from a train dispatcher or a control operator. On most railroads, trains move on main tracks outside of yard limits, and through interlockings, only when specifically authorized by a train dispatcher or control operator. This authorization might take the form of an indication conveyed by a fixed signal, or a movement authority transmitted in writing, orally, or by digital means. Such track would conform to the definition of controlled track.

Some railroads extend the control of a train dispatcher to main tracks within yard limits. This control is exercised by requiring the crew of every train and engine to obtain a track warrant specifying the limits of the territory in which the crew may operate. The track warrant lists all restrictions that are in effect within the limits specified, including any working limits established to protect roadway workers or train movements. The working limits are delineated by flags as specified in § 214.321(c)(5). Track from which trains can be effectively withheld by such a procedure would conform to the definition of controlled track.

Exclusive track occupancy is the means prescribed in this section to establish working limits on controlled track. The procedures associated in this section with exclusive track occupancy are intended to assure that unauthorized train movements will not occur within working limits established by exclusive track occupancy.

This section addresses controlled track, as it is the type of track upon which exclusive track occupancy can be established by the dispatcher or control operator. By virtue of their authority to control train movements on a segment of controlled track, a dispatcher or control operator can also hold trains clear of that segment by withholding movement authority from all trains. The procedure depends upon communication of precise information between the train dispatcher or control operator, the roadway worker in charge of the working limits, and the crews of affected trains. This section is intended to prescribe that level of precision.

Paragraph (a) requires that authority for exclusive track occupancy may only be granted by the train dispatcher or control operator who has control of that track to a roadway worker who has been trained and designated to hold such an authority. No other person may be in control of the same track at the same time.

The Rule clearly defines three methods by which the tracks within exclusive track occupancy are placed under the control of a roadway worker in charge (RWIC):

1. Authority issued to the RWIC by the train dispatcher or control operator who controls train movements on that track;
2. Flagmen stationed at each entrance to the track within working limits and instructed by the RWIC to permit the movement of trains and on-track equipment (OTE) into the working limits only as permitted by him or her; or
3. The RWIC causing fixed signals at each entrance to the working limits to display an aspect indicating “stop” (local control). For the purposes of the Rule, a “fixed signal” is

a wayside block or interlocking signal which the most restrictive indication that can be conveyed is “stop.”

Paragraph (b) and corresponding subparagraphs prescribe the methods for transferring the authority for exclusive track occupancy to the roadway worker with the requisite level of accuracy.

An “authority” is the instrument that confirms trains and on-track equipment (OTE) movements have been withheld from the track(s) encompassing exclusive track occupancy. As required by the Rule, the authority must be a written or printed document and includes such instruments as a “NORAC Form D,” “Track Bulletin Form B,” “Track Warrant,” “Track and Time,” “OCS Clearance,” etc. As required by §214.321(b)(2), the RWIC must maintain possession of the authority document while it is in effect.

It is a practice on many railroads to place the name of the specific RWIC at a work site on an authority. However, on some railroads a work crew designation system (e.g., number) is placed on the authority. A crew designation procedure may, in fact, reduce confusion if a railroad has multiple employees with the same or similar name. Therefore, FRA will accept procedures where a work crew designation system is used with authorities only if such procedures include precise communication protocols to ensure trains and OTE contact the proper RWIC to enter working limits.

The Federal Railroad Administration (FRA) has reviewed whether the record under this provision must be retained for an extended period. Section 214.321(b)(2) requires the written or printed document only be maintained by the roadway worker in charge while the authority for the working limits is in effect. With respect to the requirement of a dispatcher’s written or electronic record, the Roadway Worker Protection regulation does not specify a required time for such records. Retention of dispatching records is governed by 49 C.F.R. Part 228.

Paragraph (c) and corresponding subparagraphs prescribe physical markers or features that may be used to indicate the extent of working limits established under this paragraph with the requisite level of precision.

As prescribed by §214.321 (c), the extent of working limits established through exclusive track occupancy must have a physical feature (delineation) at each working limits entrance that is clearly identifiable to approaching trains or OTE. In the case of “active” delineations, these features include either:

- Flagman or
- Fixed signal that conveys a “stop” indication.

Note: Flagmen are included as a valid means of establishing exclusive track occupancy because they are effective, and they might be the only means available on short notice or at certain locations.

Acceptable “passive” delineations consist of a

- Station with a sign identified by name,
- Clearly identifiable milepost marker,
- Clearly identifiable physical location,
  - Any physical feature, such as a switch, whereby an employee operating a train or OTE has knowledge of its specific location through physical characteristic

qualifications. Red flags or signs may also be used but approaching movements must be informed of the exact location of these devices), or

- Provisions of a direct train control system,
  - Any method of operation, such as Direct Traffic Control (DTC), Track Warrant Control (TWC), Track Permit Control System (TPCS), Form D Control System (DCS), Occupancy Control System (OCS), and similar methods of operation that are derivatives of the former timetable/train order method of operation.

An authority that withholds movements from the working limits must first be obtained by the RWIC before “passive” delineations can be used. However, flagmen with the capability to withhold movement or wayside signals conveying a “stop” aspect through local control may be used to establish and delineate working limits).

When an authority is issued to establish an exclusive track occupancy [§214.321(a)(1)], precise communication between the train dispatcher (or control operator) and trains/OTE is imperative to assure movements approaching exclusive track occupancy limits are withheld. Any movements into exclusive track occupancy limits then may occur under the direction of the RWIC in accordance with §214.321(d). Any physical location that is used alone to delineate working limits must be clearly prescribed by the operating rules of the railroad whereby train engineers and OTE operators know, in advance, the exact location of these devices in advance. Procedures such as physical characteristic qualifications of employees and listing designated physical locations in special instructions are acceptable methods to assure safe use of physical locations to delineate exclusive track occupancy limits.

Paragraph (d) allows a railroad to permit the movement of trains and equipment in working limits under the control of the roadway worker in charge. This accommodates a need to move work trains and roadway machines into and within working limits in connection with the work being performed. It also accommodates a need to move trains and equipment through working limits after all roadway workers and machines are moved into the clear or otherwise protected. Such movements will be under the direct authority of the roadway worker in charge, who must take the necessary steps to properly direct the train movement as well as protecting the roadway workers and machines at the worksite.

The authorization of movement of either trains or roadway maintenance machines within working limits without the permission of the roadway worker in charge (RWIC) would constitute a violation of § 214.321(d). Thus, movements of trains and on-track equipment that are not under the direction of the RWIC within exclusive track occupancy limits, are not in compliance with section 214.321. However, the Federal Railroad Administration (FRA) recognizes that there may be times when the RWIC cannot be contacted for an extended period of time, due to emergency or unusual circumstances, and that in extraordinary circumstances trains must be authorized to move despite lack of permission from the RWIC. The present regulation does not address this irregular situation and thus, FRA's enforcement action under these circumstances will be determined on a case-by-case basis.

In addition to withholding movements that are approaching working limits, it is also imperative railroad rules prohibit train and OTE from entering the track between the delineations, e.g., a hi-rail vehicle occupying a track at a highway-rail grade crossing or other OTE from entering at a hand-operated switch.

Paragraph (d) also requires that trains and other equipment moving through working limits under the authority of the roadway worker in charge move at restricted speed unless higher speed is specifically authorized by the roadway worker in charge. This provision establishes a fail-safe default speed to apply in the absence of information to the contrary. It also

establishes the sole authority of the roadway worker in charge to specify the speed of trains and equipment through the working limits.

Many different situations will arise in the application of this section. Where “passive” delineations are utilized, movements must be provided with advance notification of the type and exact location of these devices. For instance, a roadway worker in charge might wish to establish working limits between mileposts 15 and 16 on a single main track but the train dispatcher can only hold trains at controlled signals at mileposts 10 and 20. In that case, the rules of the railroad could permit the roadway worker to place flags or some recognized signal at the ends of the working limits, mileposts 15 and 16, and the roadway worker would only be in charge of the track between the flags.

Another roadway worker might establish working limits between mileposts 12 and 14 during the same time using the same method. The train dispatcher would still hold trains at the same controlled signals, but the working limits would not overlap.

An important point in the application of this section is that a train must be informed of the existence of working limits if it is permitted by signal indication or some other authority to approach the working limits. It is not sufficient to just place flags and go to work. However, a railroad may permit the flags to be moved as the work progresses, so long as all trains approaching the working limits are informed of their existence.

There are concerns regarding procedures on some railroads whereby trains and/or other OTE are admitted into the limits of an authority without the direction of the RWIC or without any information about the existence of working limits within the authority. One example is where the limits of an authority in centralized traffic control (CTC) territory would be at two Controlled Points located a significant distance from the actual work. With this type of procedure, protection is predicated on restricted speed and locomotive engineers or OTE operators looking out for flag(s) somewhere within the limits of the authority (in this case, between two Controlled Points). Where used, this procedure also raises the question regarding temporary speed restriction signs or other similar devices within the authority limits which may be misinterpreted as flags delineating working limits.

While the above procedures have been commonly used in the past, to a large extent they rely on trains operating at restricted speed to protect the roadway workers. This conflicts with one of the most important underpinnings of the Rule, which is the prohibition of restricted speed, or its functional equivalent, to protect roadway workers.

### **Overlapping Authorities/Multiple Groups**

It is an established practice on some railroads for multiple uncoordinated roadway work groups to be located within the same authority limits. For example, a RWIC may obtain a track and time permit (authority) in CTC territory between Control Points 10 and 20. The RWIC would then place red flags somewhere between mileposts 12 and 13. Subsequently, one or more additional roadway work activities with the same or overlapping authority limits occupy the track and place their flags after the first RWIC placed his/her flags.

Consequently, there are multiple independent and uncoordinated work activities each with potentially overlapping working limits. Specifically, there is the potential for a train or OTE to receive radio instructions to pass a red flag when that communication is obtained from the incorrect RWIC. This is of particular concern if a RWIC were to place flags between/within another RWIC's flags. To eliminate the potential problem associated with multiple employees directing movements, §214.319 (b) states - *“Only one roadway worker shall have control over working limits for the purpose of establishing on-track safety.”* This must prevail to fulfill the intent of exclusive track occupancy.



When multiple work groups use a common working limits, it is imperative that railroads have procedures in place to assure on-track safety when the RWIC releases the track to the train dispatcher or when he or she authorizes movements into the working limits. For example, the RWIC recording additional groups that occupy his or her working limits or the train dispatcher placing or “stacking” blocking devices for each additional work group. However, all movements within working limits must remain under the control of the RWIC.

### **Withholding Equipment**

In addition to protection from trains, the Rule prescribes procedures to protect roadway workers from the dangers associated with the movement of OTE. Railroads that permit trains into the limits of an authority without the direction of the RWIC, or without information about the location of working limits, also allow other OTE to proceed with even less controls. Specifically, other OTE may not be informed of working limits that may be within an authority granted for movement (overlapping movement and work authorities). Certain railroad rules permit OTE to move at substantial speeds (up to 45 mph) proceeding prepared to stop within one half the range of vision.

While OTE may be able to stop in less distance than trains, the Rule was clearly crafted to protect workers from trains and OTE. Furthermore, the increasing complexity and size of OTE can at times result in risks regarding adequate stopping distances similar to trains. Therefore, the definition of exclusive track occupancy specifies that trains and OTE movements must be withheld from the track within exclusive track occupancy.

### **§ 214.323 Foul time.**

*Working limits established on controlled track through the use of foul time procedures shall comply with the following requirements:*

- (a) Foul time may be given orally or in writing by the train dispatcher or control operator only after that employee has withheld the authority of all trains to move into or within the working limits during the foul time period.*
- (b) Each roadway worker to whom foul time is transmitted orally shall repeat the track number, track limits and time limits of the foul time to the issuing employee for verification before the foul time becomes effective.*
- (c) The train dispatcher or control operator shall not permit the movement of trains or other on-track equipment onto the working limits protected by foul time until the roadway worker who obtained the foul time has reported clear of the track.*

**Guidance.** Section 214.323 prescribes another form of on-track safety involving the establishment of working limits. This method of protection is called foul time and is only prescribed for use on controlled track. The definition of foul time should be referenced for a complete understanding of this concept. Foul time requires oral or written notification by the train dispatcher or control operator to the responsible roadway worker that no trains will be operating within a specific segment of track during a specific time period. The steps to obtain foul time are detailed in this section. Once foul time is given, a dispatcher or control operator may not permit the movement of trains onto the protected track segment until the responsible roadway worker reports clear.

Foul time is a simplified method of establishing working limits. It is distinguished from exclusive track occupancy by not requiring a written copy of the authorization, and by not



permitting the movement of trains or other equipment within the working limits.

### **§ 214.325 Train coordination**

*Working limits established by a roadway worker through the use of train coordination shall comply with the following requirements:*

- (a) Working limits established by train coordination shall be within the segments of track or tracks upon which only one train holds exclusive authority to move.*
- (b) The roadway worker who establishes working limits by train coordination shall communicate with a member of the crew of the train holding the exclusive authority to move, and shall determine that:*
  - (1) The train is visible to the roadway worker who is establishing the working limits,*
  - (2) The train is stopped,*
  - (3) Further movements of the train will be made only as permitted by the roadway worker in charge of the working limits while the working limits remain in effect, and*
  - (4) The crew of the train will not give up its exclusive authority to move until the working limits have been released to the train crew by the roadway worker in charge of the working limits.*

Discussion from Final Rule of December 16, 1996:

#### **Emergency Procedures/Train Coordination**

Commenters suggested that a provision be added to the rule permitting roadway workers to perform their duties on the track, in an emergency, without establishing one of the prescribed forms of on-track safety. For example, if an ice storm has caused trees to fall across the track and into the signal and communication wires, roadway workers would accompany trains to remove the trees and reestablish communications. Under the proposed rule, the roadway workers would be unable to establish working limits because of the presence of the train and the inability to immediately communicate with the dispatcher. The Advisory Committee discussed this question at the July 12 meeting. Various members clearly stated their need for such a provision, as well as their concerns regarding potential problems associated with it. The Advisory Committee did not reach consensus on the question.

However, FRA has considered the concerns expressed by the Advisory Committee. FRA believes that a form of on-track safety can be arranged whereby a roadway worker or a roadway work group would be protected by the movement authority of a train. The method prescribed by FRA, termed Train Coordination, incorporates all the safeguards necessary to protect the roadway workers from train movements, and addresses the concerns of the commenters as well. FRA independently expanded the concept discussed in the comments and by the Advisory Committee. FRA believes that, rather than restricting this provision to emergency situations, it should be crafted for use in any situation, including cleaning snow out of switches for a specific train, handling materials with a work train, or repairing track at a derailment site. The underlying principle is that a roadway worker should be assured that a train will not arrive unexpectedly at a work location. The provision for Train coordination provides that assurance.

**§ 214.327 Inaccessible track.**

- (a) *Working limits on non-controlled track shall be established by rendering the track within working limits physically inaccessible to trains at each possible point of entry by one of the following features:*
- (1) *A flagman with instructions and capability to hold all trains and equipment clear of the working limits;*
  - (2) *A switch or derail aligned to prevent access to the working limits and secured with an effective securing device by the roadway worker in charge of the working limits;*
  - (3) *A discontinuity in the rail that precludes passage of trains or engines into the working limits;*
  - (4) *Working limits on controlled track that connects directly with the inaccessible track, established by the roadway worker in charge of the working limits on the inaccessible track; or*
  - (5) *A remotely controlled switch aligned to prevent access to the working limits and secured by the control operator of such remotely controlled switch by application of a locking or blocking device to the control of that switch, when:*
    - (i) *The control operator has secured the remotely controlled switch by applying a locking or blocking device to the control of the switch, and*
    - (ii) *The control operator has notified the roadway worker who has established the working limits that the requested protection has been provided, and*
    - (iii) *The control operator is not permitted to remove the locking or blocking device from the control of the switch until receiving permission to do so from the roadway worker who established the working limits.*
- (b) *Trains and roadway maintenance machines within working limits established by means of inaccessible track shall move only under the direction of the roadway worker in charge of the working limits, and shall move at restricted speed.*
- (c) *No operable locomotives or other items of on-track equipment, except those present or moving under the direction of the roadway worker in charge of the working limits, shall be located within working limits established by means of inaccessible track.*

**Guidance.** Section 214.327 requires that working limits on non-controlled track be established by rendering the track physically inaccessible to trains and equipment. A reference to the definitions of non-controlled track and inaccessible track is useful to the understanding of this section. Trains and equipment can operate on non-controlled track without having first received specific authority to do so. Trains and equipment cannot be held clear of non-controlled track by simply withholding their movement authority. The roadway worker in charge of the working limits must therefore render non-controlled track within working limits physically inaccessible to trains and equipment, other than those operating under the authority of that roadway worker, by using one or more of the provisions of this section.

Typical examples of non-controlled track to which this section would apply include main tracks within yard limits where trains are authorized by an operating rule to move without further specific authority, yard tracks, and industrial side tracks. Sub-paragraphs (a)(1)

through (a)(5) detail the physical features that may be used to block access to non-controlled track within working limits.

The term discontinuity in the rail in subparagraph (a)(3) refers to a rail that is removed from the track or purposely misaligned to serve as a derail, or it could be simply the end of a track. Of course, the rules of the railroad would specify the manner in which trains would be protected from derailing on a discontinuous rail.

Subparagraph (a)(4) essentially permits inaccessible track to be established as an extension of working limits on controlled track. For instance, if a roadway worker establishes working limits on a single main track between mileposts 10 and 20, the working limits could include all non-controlled tracks that connect only to that main track, provided no operable locomotives are located on those tracks.

Subparagraph (a)(4) might also be used by a railroad to establish working limits within a remotely controlled hump yard. If a control operator can block access to a track at the hump under subparagraph (a)(5) with a remotely controlled switch, a railroad could permit the establishment of inaccessible track by creating a form of controlled track at the pull-out end, away from the hump. In that case, a train or engine could not enter the pull-out end of a classification track without authority of the control operator. In that manner, both ends of the inaccessible track would be properly secured.

The exclusion of operable locomotives or other on-track equipment differs from the restriction on movement of trains and equipment within working limits on controlled track. On controlled track, those movements can be controlled, by definition. However, on non-controlled track, the presence of an operable locomotive represents a threat to roadway workers from the possibility of its operation and movement by someone unaware of the presence of the roadway workers.

A locomotive could be rendered inoperative by locking or removing controlling handles, or by tagging them in conformance with the rules of the railroad.

On a small railroad, the locomotive engineer might also be a roadway worker. If that person has the only reverser handle for the only locomotive in his possession, and no other railroad's crews are permitted to operate on the track, then that railroad's track is rendered inaccessible.

#### **§ 214.329 Train approach warning provided by watchmen/lookouts.**

*Roadway workers in a roadway work group who foul any track outside of working limits shall be given warning of approaching trains by one or more watchmen/lookouts in accordance with the following provisions:*

- (a) Train approach warning shall be given in sufficient time to enable each roadway worker to move to and occupy a previously arranged place of safety not less than 15 seconds before a train moving at the maximum speed authorized on that track can pass the location of the roadway worker.*
- (b) Watchmen/lookouts assigned to provide train approach warning shall devote full attention to detecting the approach of trains and communicating a warning thereof, and shall not be assigned any other duties while functioning as watchmen/lookouts.*
- (c) The means used by a watchman/lookout to communicate a train approach warning shall be distinctive and shall clearly signify to all recipients of the warning that a train or other on-track equipment is approaching.*

- (d) *Every roadway worker who depends upon train approach warning for on-track safety shall maintain a position that will enable him or her to receive a train approach warning communicated by a watchman/ lookout at any time while on-track safety is provided by train approach warning.*
- (e) *Watchmen/lookouts shall communicate train approach warnings by a means that does not require a warned employee to be looking in any particular direction at the time of the warning, and that can be detected by the warned employee regardless of noise or distraction of work.*
- (f) *Every roadway worker who is assigned the duties of a watchman/ lookout shall first be trained, qualified and designated in writing by the employer to do so in accordance with the provisions of § 214.349.*
- (g) *Every watchman/lookout shall be provided by the employer with the equipment necessary for compliance with the on-track safety duties which the watchman/lookout will perform.*

**Guidance.** Section 214.329 establishes the procedures for on-track safety of groups that utilize train approach warning. A reference to the definition of train approach warning would be useful to the understanding of this section. Section 214.329 specifies the circumstances and the manner in which roadway work groups may use this method of on-track safety. Prescribed here is the minimum amount of time for roadway workers to retreat to a previously arranged place of safety, the duties of the watchman/lookout and the fundamental characteristics of train approach warning communication.

It must be particularly noted that the 15-second train approach time does not include the time taken for a roadway worker to move clear of the track and into a place of safety. If that movement takes 10 seconds, then a train must be visible in time for a warning to be given 25 seconds before the train arrives.

Roadway workers, as indicated in the Rule, must have an acceptable “place of safety” to use to clear to upon the approach of trains when using train approach warning as a form of on-track safety. In normal circumstances, it is expected that workers will clear **all** tracks upon the approach of a train. Clearing onto another track where train approach warning is established may potentially trap workers if multiple train movements occur at the location in question. Regardless of the number of tracks at a work site, it is important to consider impediments to train approach warning at locations such as rock cuts or other locations with limited clearance.

It is also important to review §214.313(b) which states: “A roadway worker shall not foul a track except when necessary for the performance of duty.” Therefore, workers must have a specific reason in order to move into another track upon the approach of a train (e.g., work activity). This practice is only then acceptable if train approach warning is provided for all tracks without interruption and the workers have absolutely no chance of being trapped if multiple train movements simultaneously occur. In all cases where train approach warning is used, it is critical that comprehensive instructions are provided to roadway workers about where to clear track(s) upon the approach of trains.

Paragraph (e) states that the warning method shall not require a warned employee to be looking in a particular direction to detect the warning. The warned employee is one who is fouling or near the track, and who is being protected by the watchman/lookout. The warned employee is not necessarily another watchman/lookout.

A railroad may elect to use a chain of watchmen/lookouts to relay the warning of an approaching train. Since a watchman/lookout is required to maintain a vigilant watch, it is

possible that a clear visual signal may be used for communication among watchmen/lookouts.

Radio communication or a cell phone may also be used as a supplement to the equipment issued to the watchman/lookout, but extreme care must be taken to guard against non-communication in the event of a radio failure. In particular, the portable radios commonly used for such purposes might suffer battery failure with no warning, thus breaking a vital communication link. A radio and/or cell phone shall not be considered proper equipment to provide sole auditory warning by a Watchman/Lookout, in compliance with §214.329.

This section further imposes a duty upon the employer to provide the watchman/lookout employee with the requisite equipment necessary to carry out his on-track safety duties. It is intended that a railroad's on-track safety program would specify the means to be used by watchmen/lookouts to communicate a warning, and that they be equipped according to that provision.

The rule does not include a provision for train approach warning by any means other than the use of watchmen/lookouts. FRA is not aware of any other means of effectively performing this function with the requisite reliability, and will not place requirements for an untried system in this rule. However, the Advisory Committee report states that "FRA will incorporate a near-term time-specific requirement to utilize on-track personal warning systems for roadway workers working alone under any conditions not requiring positive protection." FRA realizes that the technological advancements incorporated in ATCS, PTC or PTS might in the future provide another method of establishing on-track safety in compliance with this subpart. Although such technology is not specifically provided for in the current rule. Opportunities to employ advancements in this area will be handled pursuant to the waiver process. FRA will therefore be most interested in knowing when such systems are developed, tested, and proven reliable.

#### **§ 214.331 Definite train location.**

*A roadway worker may establish on-track safety by using definite train location only where permitted by and in accordance with the following provisions:*

- (a) A Class I railroad or a commuter railroad may only use definite train location to establish on-track safety at points where such procedures were in use on January 15, 1997.*
- (b) Each Class I or commuter railroad shall include in its on-track safety program for approval by FRA in accordance with § 214.307 of this part a schedule for phase-out of the use of definite train location to establish on-track safety.*
- (c) A railroad other than a Class I or commuter railroad may use definite train location to establish on-track safety on subdivisions only where:*
  - (1) Such procedures were in use on January 15, 1997, or*
  - (2) The number of trains operated on the subdivision does not exceed:*
    - (i) Three during any nine-hour period in which roadway workers are on duty, and*
    - (ii) Four during any twelve-hour period in which roadway workers are on duty.*
- (d) Definite train location shall only be used to establish on-track safety according to the following provisions:*

- (1) Definite train location information shall be issued only by the one train dispatcher who is designated to authorize train movements over the track for which the information is provided.*
- (2) A definite train location list shall indicate all trains to be operated on the track for which the list is provided, during the time for which the list is effective.*
- (3) Trains not shown on the definite train location list shall not be operated on the track for which the list is provided, during the time for which the list is effective, until each roadway worker to whom the list has been issued has been notified of the train movement, has acknowledged the notification to the train dispatcher, and has canceled the list. A list thus canceled shall then be invalid for on-track safety.*
- (4) Definite train location shall not be used to establish on-track safety within the limits of a manual interlocking, or on track over which train movements are governed by a Traffic Control System or by a Manual Block System.*
- (5) Roadway workers using definite train location for on-track safety shall not foul a track within ten minutes before the earliest time that a train is due to depart the last station at which time is shown in approach to the roadway worker's location nor until that train has passed the location of the roadway worker.*
- (6) A railroad shall not permit a train to depart a location designated in a definite train location list before the time shown therein.*
- (7) Each roadway worker who uses definite train location to establish on-track safety must be qualified on the relevant physical characteristics of the territory for which the train location information is provided.*

**Guidance.** Section 214.331 describes a system of on-track safety which provides roadway workers with information as to the earliest times at which trains may leave certain stations, having been restricted at those stations by the train dispatcher or control operator. This form of on-track safety is called Definite Train Location. A reference to its definition is helpful to distinguish it from an informational lineup of trains, which is addressed in § 214.333.

Paragraph (a) limits the use of definite train location for on-track safety by Class I railroads to track where such a system was already in use on the effective date of this rule.

Paragraph (b) requires that a Class I railroad using a definite train location system must phase it out according to a schedule submitted to FRA with that railroad's on-track safety program.

Paragraph (c) establishes that definite train location can be used on certain subdivisions owned by railroads other than Class I railroads under certain specified conditions. These conditions include whether the system was in use before the effective date of this rule, or whether the subdivision has railroad traffic density below certain levels specified in that section during periods when roadway workers are normally on and about the track. Advisory Committee members felt that the amount and frequency of the traffic on a particular track dictated whether this form of on-track safety was feasible. FRA therefore proposes to incorporate this factor into the rule to allow some short lines and regional railroads to utilize this system.

Paragraph (d) and corresponding subparagraphs (1) through (6) set forth the requirements for a definite train location system and the qualifications that a roadway worker must have before using this system as a form of on-track safety.



**§ 214.333 Informational line-ups of trains.**

- (a) *A railroad is permitted to include informational line-ups of trains in its on-track safety program for use only on subdivisions of that railroad upon which such procedure was in effect on March 14, 1996.*
- (b) *Each procedure for the use of informational line-ups of trains found in an on-track safety program shall include all provisions necessary to protect roadway workers using the procedure against being struck by trains or other on-track equipment.*
- (c) *Each on-track safety program that provides for the use of informational line-ups shall include a schedule for discontinuance of the procedure by a definite date.*

**Guidance.** Section 214.333 specifies conditions for the use of informational line-ups of trains. Some railroads have used a form of informational line-ups to provide on-track safety for roadway workers for many years. Such a procedure requires the roadway worker to have a full understanding of the particular procedure in use, and the physical characteristics of the territory in which they are working. The Advisory Committee addressed this issue with the following specific recommendation:

The Committee realizes that line-ups are being used less as a form of protection in the industry and recommends that line-up use be further reduced, eventually discontinued and replaced with Positive Protection as quickly as feasible, grandfathering line-up systems presently in use.

Line-ups as used in this section differ from lists of trains in § 214.329 in that line-ups need not include definite restriction as to the earliest times at which trains may depart stations. FRA therefore follows the Advisory Committee recommendation by allowing railroads presently using line-ups to continue doing so under conditions presently in effect, provided that their on-track safety programs that are reviewed and approved by FRA contain adequate provisions for safety, and a definite date for completion of phase-out.

This will be an item of particular concern when FRA reviews the roadway worker protection program of any railroad that includes a provision for informational line-ups. The program must include adequate provisions to ensure that roadway workers will not be surprised by trains while working. It must also include a realistic date for phase-out.

**§ 214.335 On-track safety procedures for roadway work groups.**

- (a) *No employer subject to the provisions of this part shall require or permit a roadway worker who is a member of a roadway work group to foul a track unless on-track safety is provided by either working limits, train approach warning, or definite train location in accordance with the applicable provisions of §§ 214.319, 214.321, 213.323, 214.325, 214.327, 214.329 and 214.331 of this part.*
- (b) *No roadway worker who is a member of a roadway work group shall foul a track without having been informed by the roadway worker responsible for the on-track safety of the roadway work group that on-track safety is provided.*
- (c) *Roadway work groups engaged in large-scale maintenance or construction shall be provided with train approach warning in accordance with § 214.329 (§ 214.327 in original, to be corrected) for movements on adjacent tracks that are not included within working limits.*

**Guidance.** Section 214.335 specifies requirements for on-track safety to be provided for roadway work groups. Other sections of the regulation discuss matters affecting the group

such as the different types of on-track safety protection available to a group and the job briefing necessary for a group, but this section prescribes what procedures are required to fully comply with this subpart. The definition of roadway work group enables the distinction between general methods of providing on-track safety for groups and for individuals working alone. Examples of roadway work groups are a large or small track gang, a pair of signal maintainers, a welder and welder helper, and a survey party.

Paragraph (a) indicates that employers shall not require or permit roadway work groups to foul a track unless they have established on-track safety through working limits, train approach warning, or definite train location.

The reciprocal responsibility for the roadway worker is expressed in Paragraph (b). He should not foul a track without having been informed by the roadway worker in charge that on-track safety is being provided.

The concept of protecting roadway workers from the hazards of trains and other on-track equipment on adjacent tracks is also important in this rule. A reference to the definition of adjacent tracks will clarify the meaning of paragraph (c) which details the conditions under which train approach warning must be used on adjacent tracks that are not within working limits. These are conditions in which the risk of distraction is significant, and which require measures to provide on-track safety on adjacent tracks. *Note: Paragraph (c) will be deleted from the regulation effective July 1, 2014 and replaced by § 214.336 On-track Safety Procedures for Certain Roadway Work Groups and Adjacent Tracks.)*

The principle behind the reference to large-scale maintenance or construction is the potential for distraction, or the possibility that a roadway worker or roadway maintenance machine might foul the adjacent track and be struck by an approaching or passing train. This issue was addressed in the report of the Advisory Committee with the recommendation:

Before performing any work that requires Fouling the track or Adjacent Track(s), Positive Protection must be obtained and verified to be in effect by the roadway worker assigned responsibility for the work. Large scale track maintenance and/or renovations, such as but not limited to, rail and tie gangs, production in-track welding, ballast distribution, and undercutting, must have protection (Working Limits or Train Approach Warning) on Adjacent Tracks as well. FRA will consider the provisions made for this situation when reviewing each railroad's on-track safety program.

The spacing of less than 25 feet between track centers, which defines adjacent tracks for the purpose of this rule, represents a consensus decision of the Advisory Committee. Several railroads have recently extended their lateral track spacing to 25 feet. Tracks spaced at that distance may not cause a hazard to employees in one track from trains and equipment moving on the other track. FRA believes that no purpose would be served by requiring these tracks to be again spaced at a slightly greater distance. Therefore, tracks spaced at 25 feet are not defined as adjacent tracks, but tracks spaced at a lesser distance will be so defined. Tracks that converge or cross will be considered as adjacent tracks in the zone through which their centers are less than 25 feet apart.

As a practical matter, FRA will apply a rule of reason to the precision used in measuring track centers, so that minor alignment deviations within the limits of the Federal Track Safety Standards (49 CFR 213) would not themselves place such short segments of track within the definition of adjacent tracks.



**§ 214.337 On-track safety procedures for lone workers.**

- (a) *A lone worker who fouls a track while performing routine inspection or minor correction may use individual train detection to establish on-track safety only where permitted by this section and the on-track safety program of the railroad.*
- (b) *A lone worker retains an absolute right to use on-track safety procedures other than individual train detection if he or she deems it necessary, and to occupy a place of safety until such other form of on-track safety can be established.*
- (c) *Individual train detection may be used to establish on-track safety only:*
  - (1) *By a lone worker who has been trained, qualified, and designated to do so by the employer in accordance with § 214.347 of this subpart;*
  - (2) *While performing routine inspection and minor correction work;*
  - (3) *On track outside the limits of a manual interlocking, a controlled point, or a remotely controlled hump yard facility;*
  - (4) *Where the lone worker is able to visually detect the approach of a train moving at the maximum speed authorized on that track, and move to a previously determined place of safety, not less than 15 seconds before the train would arrive at the location of the lone worker;*
  - (5) *Where no power-operated tools or roadway maintenance machines are in use within the hearing of the lone worker; and*
  - (6) *Where the ability of the lone worker to hear and see approaching trains and other on-track equipment is not impaired by background noise, lights, precipitation, fog, passing trains, or any other physical conditions.*
- (d) *The place of safety to be occupied by a lone worker upon the approach of a train may not be on a track, unless working limits are established on that track.*
- (e) *A lone worker using individual train detection for on-track safety while fouling a track may not occupy a position or engage in any activity that would interfere with that worker's ability to maintain a vigilant lookout for, and detect the approach of, a train moving in either direction as prescribed in this section.*
- (f) *A lone worker who uses individual train detection to establish on-track safety shall first complete a written Statement of On-track Safety. The Statement shall designate the limits of the track for which it is prepared and the date and time for which it is valid. The statement shall show the maximum authorized speed of trains within the limits for which it is prepared, and the sight distance that provides the required warning of approaching trains. The lone worker using individual train detection to establish on-track safety shall produce the Statement of On-track Safety when requested by a representative of the Federal Railroad Administrator.*

**Guidance.** Section 214.337 establishes specific on-track safety procedures for the lone worker. Paragraph (a) sets forth the general requirement that restricts the use of individual train detection to circumstances prescribed in this section and the corresponding on-track safety program of the railroad.

Concern has been raised about roadway workers who must foul the track in order to make the track inaccessible (49 C.F.R. §214.327). The specific concern is whether these workers need to have on-track safety protection while in the process of establishing on-track safety for the work to be performed and fouling the track. This type of activity is typically found with

lone workers who may need to install a portable derail or to secure a switch, in order to establish on-track safety.

When looking at the individual roadway worker's responsibility, found at §214.313, roadway workers are not to foul the track unless necessary for the performance of their duties and they are responsible to determine that on-track safety is being provided prior to fouling the track. When fouling the track to make the track inaccessible, roadway workers are fouling in performance of their duties and should make sure they are protected. In many cases, roadway workers are able to use individual train detection in accordance with §214.337(c). However, §214.337(c)(3) prohibits the use of individual train detection within the limits of a manual interlocking, a controlled point, or a remotely controlled hump yard facility. Of course, as §214.327 makes clear, inaccessible track may be used as a method of protection only on non-controlled track (see definition of "controlled track" in §214.7), §214.327 so the factors that would preclude using individual train detection will not ordinarily be present where inaccessible track is being established.

Based on the foregoing, lone workers need protection when fouling the track, even if only to establish on-track safety and the Roadway Worker Protection regulation strictly prohibits a lone worker from using individual train detection while performing any type of associated work activities in a manual interlocking, controlled point, or remote hump yard facility.

Paragraph (b) represents the clear consensus of the Advisory Committee that a decision to not use individual train detection should rest solely with the lone worker, and may not be reversed by any other person. On the other hand, improper use of individual train detection where this rule or the on-track safety program of the railroad prohibits it would be subject to review. This provision was stated by the Advisory Committee as part of its Specific Recommendation 3, which part reads, "All roadway workers have the absolute right to obtain positive protection at any time and under any circumstances if they deem it necessary, or to be clear of the track if adequate protection is not provided."

Paragraph (c)(3) states individual train detection may be used to establish on-track safety only on track outside the limits of a manual interlocking, a controlled point, or a remotely controlled hump yard facility. The Federal Railroad Administration (FRA) is frequently asked about signal installations in dark territory that convey switch position. Specifically, these installations appear to be an interlocking, but are operated by a train crew to manipulate a switch. This type of signal installation is neither defined nor addressed in the Roadway Worker Protection regulation. FRA is frequently asked whether such locations are considered manual interlockings or simply power operated switches, and whether Individual Train Detection (ITD) is permissible at these locations.

49 C.F.R. §214.7 does not include a definition of the term manual interlocking. However, FRA has concluded that the installations in question which may have some physical resemblance to interlockings, but are operated by train crews manipulating the switch, electronically or by hand, are considered "hand/power operated switches." FRA has determined the following:

- The signals at these installations do not convey train movement authority, nor do they meet the basic requirements of §236.750, Interlocking automatic and §236.751, Interlocking manual; and
- The hand/power switches at these installations are not controlled by a train dispatcher or control operator; and are not part of a manual interlocking or controlled point.

Accordingly, the use of ITD, (§214.337), is permissible as the minimum form of on-track safety at these hand/power installations, although not allowed at true interlockings and controlled points. When using ITD, at these installations, or any other locations where such use is permitted, the lone worker may determine that a more restrictive form of on-track safety is required, and this decision cannot be reversed by any other person.

Aside from hand/power operated switches, switches that can be manipulated by hand as well as by a train dispatcher/operator are considered “dual control switches.” These switches are located within manual interlockings and controlled points and the use of ITD within these installations is prohibited.

Paragraph (c)(4) establishes a method of on-track safety for the lone worker, in which the roadway worker is capable of visually detecting the approach of a train and moving to a previously determined location of safety at least 15 seconds before the train arrives.

As in the discussion of train approach warning, it must be particularly noted that the 15-second train approach time does not include the time taken for a roadway worker to move clear of the track and into a place of safety. If that movement takes 10 seconds, then a train must be visible in time for a warning to be given 25 seconds before the train arrives.

It is important to note that the Advisory Committee decided that the use of individual train detection is appropriate only in limited circumstances. FRA has therefore drafted this section to prescribe strictly limited circumstances in which an individual may foul a track outside of working limits while definitely able to detect the approach of a train or other on-track equipment in ample time to move to a place of safety. This safety method requires the lone worker to be in a state of heightened awareness, since no other protection system will be in place to prevent one from being struck by a train or other on-track equipment. The corresponding subparagraphs to paragraph (c) provide detailed requirements for the use of this form of on-track safety.

Paragraph (a) sets forth the general requirement that restricts the use of individual train detection to circumstances prescribed in this section and the corresponding on-track safety program of the railroad. Paragraph (c) establishes a method of on-track safety for the lone worker, in which the roadway worker is capable of visually detecting the approach of a train and moving to a previously determined location of safety at least 15 seconds before the train arrives. Only if all of the elements of §214.337 are met, is it acceptable for a roadway worker to use individual train detection to place a highway/rail vehicle on a non-controlled track. Once on the track, movements may be conducted under the provisions of the railroad operating rules [§214.301(c)].

Section §214.337 (c)(5) is explicitly clear that no power operated tools or roadway maintenance machines can be in use within the hearing range of lone worker using individual train detection. Accordingly, even though power tools can be made quiet so that they won't impair an individual's hearing ability, they still are defined as a power tool. Power operated tools shall not be utilized by a lone worker using individual train detection. Although a “quiet” tool might not impair the hearing, the level of concentration required to operate such a device could have an impact on the individual's ability to detect approaching trains.

Paragraph (d) clearly states that a lone worker may not clear onto a track unless working limits are established on that track. The only exception is that a lone worker may clear into a track as long as working limits are established on that track in accordance with §214.319 (Working Limits, Generally). To establish working limits by becoming a flagman would require:

- 1) Lone Worker be equipped with the proper equipment and
- 2) Lone Worker has the capability to stop trains in both directions.

Therefore, unless both of these requirements are met, it is not acceptable for a lone worker to clear onto a track upon the approach of a train and establish his or her own flagging type working limits.

Paragraph (f) prescribes the concept of a written Statement of On-track safety, prepared by the lone roadway worker. The reasoning behind this requirement is to assist the roadway worker in focusing on the nature of the task, the risks associated with the task, and the form of on-track safety necessary to safely carry out assigned duties.

The regulation does not specify the maximum area which an on-track safety statement can encompass. However, the statement of on-track safety must always apply to the current task and conditions.

#### **§ 214.339 Audible warning from trains.**

*Each railroad shall require that the locomotive whistle be sounded, and the locomotive bell be rung, by trains approaching roadway workers on or about the track. Such audible warning shall not substitute for on-track safety procedures prescribed in this part.*

**Guidance.** Section 214.339 requires audible warning from locomotives before trains approach roadway workers. The implementation of this requirement will necessitate railroad rules regarding notification to trains that roadway workers are on or about the track. This notification could take the form of portable whistle posts, train movement authorities, or highly visible clothing to identify roadway workers and increase their visibility. This section is not optional with a railroad, and FRA intends that it will preempt any local restrictions on the sounding of locomotive whistles.

The only mention of highly visible clothing in the regulation is found in the section analysis related to this provision. The type of clothing or other visible indication of the presence of roadway workers is left to the option of the railroad. The method to be used by the railroad should be practical and effective, considering the varying situations on different railroads. It should be an item of particular interest in the FRA review of a railroad's program.

As trains approach each roadway worker or roadway work group located within a large-scale maintenance project that is being conducted, the locomotive whistle shall be sounded and the locomotive bell rung. Electric multiple unit trains are generally not equipped with bells and FRA inspection activity will account for this mechanical characteristic. In addition, when railroads are conducting reverse movements, it is expected that the locomotive whistle will be sounded and the bell rung in accordance with §214.337 when approaching roadway workers. The practice of sounding the locomotive whistle and ringing the locomotive bell only one time on the approach to a large-scale roadway work group does not meet the intent of the regulation. The specific sequence and duration of whistle blasts to be sounded approaching roadway workers shall be established by each railroad's operating rules to sufficiently warn roadway workers who may be on or about the track.

Both historically and today, roadway workers commonly acknowledge an approaching train that is sounding an audible warning and the train crew stops sounding the warning. The Federal Railroad Administration (FRA) is frequently asked whether a roadway worker's acknowledgment and the engineer's subsequent decision to stop sounding the whistle are in

compliance with the regulation. The concern is determining when the length or duration of the audible warning is sufficient.

If a railroad does not provide guidance, since the regulation does not specify the duration of the warning, the engineer must exercise discretion predicated on his or her best judgment for effectively warning roadway workers on or about the track. This discretion only applies to the duration of the audible warning, since the warning itself is clearly required. Compliance with the responsible carrier's rules and institutional knowledge should help the engineer/operator arrive at the appropriate duration of audible warning. These instructions do not in any way or manner relieve the requirement to sound the horn and ring the bell of locomotives approaching roadway workers.

There is concern regarding the locomotive whistle sounding requirement during shoving moves. In addition, what is Federal Railroad Administration's enforcement position with respect to multiple unit (MU) passenger trains that do not have bells? There are no exceptions to the requirement of affording roadway workers with an audible warning. It is incumbent on the railroad to determine how to provide the warning under all circumstances. MU equipment without bells can't ring the bell. There is no requirement that MUs be equipped with bells. MU equipment not equipped with bells is in compliance with the rule when the horn is sounded.

Locomotive engineers and inspectors must determine at what point is it necessary to sound a warning when roadway workers are not on the track occupied by the train. How many feet or number of tracks away must the workers be to excuse the engineer from sounding a warning? Trains must provide an audible warning to any roadway worker near enough to the track to have the potential to foul the track prior to the arrival of the train. When citing defects or violations for failure to give an audible warning, inspectors should be able to describe the relative position of the roadway workers with the approaching train, and why there was a potential to foul that track.

#### **§ 214.341 Roadway maintenance machines.**

(a) *Each employer shall include in its on-track safety program specific provisions for the safety of roadway workers who operate or work near roadway maintenance machines. Those provisions shall address:*

- (1) *Training and qualification of operators of roadway maintenance machines.*
- (2) *Establishment and issuance of safety procedures both for general application and for specific types of machines.*
- (3) *Communication between machine operators and roadway workers assigned to work near or on roadway maintenance machines.*
- (4) *Spacing between machines to prevent collisions.*
- (5) *Space between machines and roadway workers to prevent personal injury.*
- (6) *Maximum working and travel speeds for machines dependent upon weather, visibility, and stopping capabilities.*

(b) *Instructions for the safe operation of each roadway machine shall be provided and maintained with each machine large enough to carry the instruction document.*

- (1) *No roadway worker shall operate a roadway maintenance machine without having been trained in accordance with § 214.355.*

- (2) No roadway worker shall operate a roadway maintenance machine without having complete knowledge of the safety instructions applicable to that machine.*
- (3) No employer shall assign roadway workers to work near roadway machines unless the roadway worker has been informed of the safety procedures applicable to persons working near the roadway machines and has acknowledged full understanding.*
- (c) Components of roadway maintenance machines shall be kept clear of trains passing on adjacent tracks. Where operating conditions permit roadway maintenance machines to be less than four feet from the rail of an adjacent track, the on-track safety program of the railroad shall include the procedural instructions necessary to provide adequate clearance between the machine and passing trains.*

**Guidance.** Section 214.341 addresses specific issues concerning roadway maintenance machines that need to be included in individual railroad program submissions. FRA decided to address the hazards associated with these machines separately from those associated with trains, as the nature of the hazard is different. Referencing the definition of this term is a good place to start to understand this section. Roadway maintenance machines are devices, the characteristics or use of which are unique to the railroad environment. The term includes both on-track and off-track machines. A roadway maintenance machine need not have a position for the operator on the machine nor need it have an operator at all; it could operate automatically, or semi-automatically.

This provision excludes hand-powered devices in order to distinguish between hand tools which are essentially portable, and devices which either are larger, move faster, or produce more noise than hand tools. Hand-held power tools are not included in the definition, but because of the noise they produce, and because of the attention that must be paid to their safe operation they are addressed specifically in § 214.337, On-track safety for lone workers.

Examples of devices covered by this section include, but are not limited to, crawler and wheel tractors operated near railroad tracks, track motor cars, ballast regulators, self-propelled tampers, hand-carried tampers with remote power units, powered cranes of all types, highway-rail cars and trucks while on or near tracks, snow plows-self-propelled and pushed by locomotives, spreader-ditcher cars, locomotive cranes, electric welders, electric generators, air compressors--on- track and off-track.

Roadway maintenance machines have a wide variety of configurations and characteristics, and new types are being developed regularly. Each type presents unique hazards and necessitates unique accident prevention measures. Despite the wide diversity of the subject matter, FRA attempted to provide some guidance for the establishment of on-track safety when using roadway maintenance machines.

FRA believes that it is most effective to promulgate a general requirement for on-track safety around roadway maintenance machines, and require that the details be provided by railroad management, conferring with their employees, and industry suppliers. Several railroads have adopted comprehensive rules that accommodate present and future machine types, as well as their own operating requirements. FRA has seen the text of such rules, as well as witnessed their application and believes that they can set examples for other railroads. The requirement for issuance of on-track safety procedures for various types of roadway maintenance machines may be met by general procedures that apply to a group of various machines, supplemented wherever necessary by any specific requirements associated with particular types or models of machines.

**§ 214.343 Training and qualification, general.**

- (a) *No employer shall assign an employee to perform the duties of a roadway worker, and no employee shall accept such assignment, unless that employee has received training in the on-track safety procedures associated with the assignment to be performed, and that employee has demonstrated the ability to fulfill the responsibilities for on-track safety that are required of an individual roadway worker performing that assignment.*
- (b) *Each employer shall provide to all roadway workers in its employ initial or recurrent training once every calendar year on the on-track safety rules and procedures that they are required to follow.*
- (c) *Railroad employees other than roadway workers, who are associated with on-track safety procedures, and whose primary duties are concerned with the movement and protection of trains, shall be trained to perform their functions related to on-track safety through the training and qualification procedures prescribed by the operating railroad for the primary position of the employee, including maintenance of records and frequency of training.*
- (d) *Each employer of roadway workers shall maintain written or electronic records of each roadway worker qualification in effect. Each record shall include the name of the employee, the type of qualification made, and the most recent date of qualification. These records shall be kept available for inspection and photocopying by the Federal Railroad Administrator during regular business hours.*

**Guidance.** Section 214.343 requires that each roadway worker be given on-track safety training once every calendar year. Adequate training is integral to any safety program. Hazards exist along a railroad, not all of which are obvious through the application of common sense without experience or training. An employee who has not been trained to protect against those hazards presents a significant risk to both himself and others.

Roadway workers can be qualified to perform various duties based on their training and demonstrated knowledge. Training will vary depending on the designation of a roadway worker. Furthermore, roadway workers should generally know the designations of others in their group, so that proper on-track safety protection arrangements can be made. Written or electronic records must be kept of these qualifications, available for inspection and copying by the Administrator.

The term “demonstrated proficiency” is used in this and other sections relative to employee qualification in a broad sense to mean that the employee being qualified would show to the employer sufficient understanding of the subject that the employee can perform the duties for which qualification is conferred in a safe manner. Proficiency may be demonstrated by successful completion of a written or oral examination, an interactive training program using a computer, a practical demonstration of understanding and ability, or an appropriate combination of these in accordance with the requirements of this subpart.

The training and qualification of roadway workers and other employees who are associated with on-track safety, but are not roadway workers, is a critical element of any roadway worker protection program. There are various levels of training based on the function of the worker in relation to on-track safety. Regardless of the roadway worker’s function, it is essential that he or she and others associated with on-track safety have sufficient knowledge to assure that protection is properly applied.



A number of railroads utilize transportation employees, whose primary function is the movement and protection of trains, to provide on-track safety to contractors or fulfill the role of a flagman (withhold trains under the direction of a RWIC). These employees are not roadway workers but are sometimes directly involved with on-track safety in accordance with the roadway worker safety regulation. For example, conductors may provide on-track safety to contractors engaged by a railroad to perform work covered under the roadway worker protection regulation. The concern addressed is the frequency of training of individuals whose primary duty is not that of roadway worker. The pertinent section of the regulation that deals with such employees is 49 C.F.R. §214.343 (c) - Training and qualification, general.

The above employees must, of course, be capable of performing their functions correctly and safely. Accordingly, if a conductor is to provide on-track safety for a roadway work group, it is incumbent on that employee to have the capability to fulfill the obligations of a roadway worker who provides on-track safety, §214.353 (c). The regulation requires that the training and qualification for their primary function, under the railroad's program related to that function, will also include the means by which they will fulfill their responsibilities to roadway workers for on-track safety. For instance, a train dispatcher would not be considered a roadway worker, but would have to be capable of applying the railroad's operating rules when establishing working limits for roadway workers.

Since the regulation does not specify the interval of such training, it can be less frequent than that of a roadway worker. A conductor, who provides on-track safety for a roadway maintenance machine, or a contractor working on railroad property, would not be considered a roadway worker. That individual would receive periodic training on functions related to on-track safety as part of the training and qualification of a conductor and would need to be proficient on the elements stipulated under §214.353 (c). Table 1 provides a list of required training and qualification elements for employees other than roadway workers based on specific activities.

Enforcement of training provisions of this regulation will use the provisions of § 214.343. The following sections related to training, §§ 214.345 through 214.355, provide specific training requirements for various classes of roadway worker employees, but the enforceable provisions are found in § 214.343.

#### **§ 214.345 Training for all roadway workers.**

*The training of all roadway workers shall include, as a minimum, the following:*

- (a) Recognition of railroad tracks and understanding of the space around them within which on-track safety is required.*
- (b) The functions and responsibilities of various persons involved with on-track safety procedures.*
- (c) Proper compliance with on-track safety instructions given by persons performing or responsible for on-track safety functions.*
- (d) Signals given by watchmen/lookouts, and the proper procedures upon receiving a train approach warning from a lookout.*
- (e) The hazards associated with working on or near railroad tracks, including review of on-track safety rules and procedures.*

**Guidance.** Section 214.345 represents the basic level of training required of all roadway workers who work around moving railroad trains and on-track equipment. All persons subject



to this rule must have this training. This basic level of training is required in addition to any specialized training required for particular functions called for in sections 214.347 through 214.355. Any testing required to demonstrate qualification need not be written, because the requirements can be fulfilled by a practical demonstration of ability and understanding.

Often, contractors are engaged by railroads to conduct engineering type work. Accordingly, it is necessary to provide guidelines for contractors regarding on-track safety training and record keeping.

The roadway worker protection regulation indicates that the employer of roadway workers shall maintain records of employees who have been trained and qualified on the on-track safety rules of the railroad. Each record shall include the name of the employee, the type of qualification made, and the most recent date of qualification.

Title 49 CFR 214, Subpart A establishes responsibility for compliance with all of Part 214 under §214.5, Responsibility for Compliance. Sec. 214.5 clearly references, among a host of other entities, “any independent contractor providing goods or services to a railroad.” As such, railroad contractors and their employees performing roadway worker functions are held to the identical standards and requirements as railroads and railroad employee roadway workers. The nature of the work is identical, the nature of the risks are identical, and therefore, the training, record keeping, monitoring and other provisions should also remain identical (§214.5).

The safety of railroad operations and the safety of those performing work regulated under Part 214 is contingent upon the uniform and consistent application of operating rules, safety rules, and regulatory requirements.

The regulation clearly states that all roadway workers will receive initial training. This training must be performed prior to the commencement of work. The regulation does not specify that this training must be performed in a classroom environment. This initial training could be performed at the job site prior to the worker fouling the track. This training must include at a minimum the five basic elements defined in §214.345. Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency or take the recorded examination before assuming such duties.

#### **§ 214.347 Training and qualification for lone workers.**

*Each lone worker shall be trained and qualified by the employer to establish on-track safety in accordance with the requirements of this section, and must be authorized to do so by the railroad that conducts train operations on those tracks.*

- (a) *The training and qualification for lone workers shall include, as a minimum, consideration of the following factors:*
- (1) *Detection of approaching trains and prompt movement to a place of safety upon their approach.*
  - (2) *Determination of the distance along the track at which trains must be visible in order to provide the prescribed warning time.*
  - (3) *Rules and procedures prescribed by the railroad for individual train detection, establishment of working limits, and definite train location.*
  - (4) *On-track safety procedures to be used in the territory on which the employee is to be qualified and permitted to work alone.*

- (b) Initial and periodic qualification of a lone worker shall be evidenced by demonstrated proficiency.*

**Guidance.** Section 214.347 requires a higher degree of qualification, as the lone worker is fully responsible for his or her own protection. A primary consideration is that the lone worker should never be influenced to use individual train detection by a lack of qualification to establish a more positive form of on-track safety. The lone worker should be qualified to use all available options for on-track safety.

Unlike §214.353 (qualification of workers who provide on-track safety for roadway work groups), §214.347 does not specify physical characteristic qualifications or a recorded examination for lone workers. However, the regulation does require that the lone worker must demonstrate proficiency. It is incumbent on each railroad to assure that lone workers have the capability to properly use any form of on-track safety that a lone worker would use to provide on-track safety.

Employees who are lone workers are required to demonstrate proficiency on a periodic basis, in addition to annual training. Inquiries about training indicate there is confusion regarding annual training and periodic qualification. The term “periodic qualification” as used in this regulation refers to employees who perform specific duties such as lone workers, watchman/lookouts, flagmen, RWICs, and roadway maintenance machine operators. FRA requires that employees receive “initial and periodic qualification” for each of the duties listed above. The required time frame for the qualification differs from the required annual training.

Although the term “periodic qualification” is not defined in the rule, each railroad should specify in its program the interval at which their periodic qualification will take place.

When an employee (with only basic training) is promoted to perform duties such as lone workers, that employee must receive additional training and be qualified as required. The qualification of the lone worker is based on their demonstrated proficiency, but the qualification of the RWIC is based on a recorded examination.

**Note:** Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency before assuming such duties.

In addition, §214.337(b) states that “A lone worker retains an absolute right to use on-track safety procedures other than individual train detection if he or she deems it necessary, and to occupy a place of safety until such other form of on-track safety can be established.” A lone worker should have sufficient knowledge of the characteristics of the railroad to be able to obtain, understand and use the information that he or she needs to perform as a lone worker. It is necessary that the lone worker know the speed limits of any segment of track, and to be able to identify his or her location along the railroad by station, mile post or other physical location.

It is also important to note that a lone worker who would provide on-track safety for others during the course of a tour of duty would then be subject to the qualification requirements of §214.353.

### **§ 214.349 Training and qualification of watchmen/lookouts.**

- (a) The training and qualification for roadway workers assigned the duties of watchmen/lookouts shall include, as a minimum, consideration of the following factors:*
- (1) Detection and recognition of approaching trains.*

- (2) Effective warning of roadway workers of the approach of trains.*
- (3) Determination of the distance along the track at which trains must be visible in order to provide the prescribed warning time.*
- (4) Rules and procedures of the railroad to be used for train approach warning.*
- (b) Initial and periodic qualification of a watchman/lookout shall be evidenced by demonstrated proficiency.*

**Guidance.** Section 214.349 details the standards for qualification of a lookout, who by definition, is responsible for the protection of others. The definition of watchman/lookout is useful to understand the functions of roadway workers discussed in this section. Watchmen/lookouts must be able to perform the proper actions in the most timely manner without any chance of error in order to provide proper protection for those who are placed in their care.

Employees who are watchmen/lookouts are required to demonstrate proficiency on a periodic basis. Inquiries about training indicate there is confusion regarding annual training and periodic qualification. The term “periodic qualification” as used in this regulation refers to employees who perform specific duties such as lone workers, watchman/lookouts, flagmen, RWICs, and roadway maintenance machine operators. FRA requires that employees receive “initial and periodic qualification” for each of the duties listed above. The required time frame for the qualification differs from the required annual training.

Although the term “periodic qualification” is not defined in the rule, each railroad should specify in its program the interval at which their periodic qualification will take place.

When an employee (with only basic training) is promoted to perform duties such as watchman/lookout, that employee must receive additional training and be qualified as required. The qualification of the watchman/lookout is based on his/her demonstrated proficiency.

Note: Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency or take the recorded examination before assuming such duties.

#### **§ 214.351 Training and qualification of flagmen.**

- (a) The training and qualification for roadway workers assigned the duties of flagmen shall include, as a minimum, the content and application of the operating rules of the railroad pertaining to giving proper stop signals to trains and holding trains clear of working limits.*
- (b) Initial and periodic qualification of a flagman shall be evidenced by demonstrated proficiency.*

**Guidance.** Section 214.351 requires that flagmen be qualified on the operating rules of the railroad on which they are working. Referencing the definition of flagman would be useful to identify the class of roadway workers discussed in this section. Generally, flagmen are already required to be qualified on the operating rules that apply to their work. Flagging is an exacting procedure, and a flagman must be ready to act properly at all times in order to provide proper protection for those under his care. The distinction between flagmen and watchmen/lookouts should be noted, in that flagmen function to restrict or stop the movement of trains, while watchmen/lookouts detect the approach of trains and provide warning thereof to other roadway workers.

When working limits are established to provide on-track safety, all movements of trains and equipment within working limits shall be made only under the direction of the RWIC. If a conductor/flagman is assigned to withhold movements, that employee may authorize movements under the direction of the RWIC. If a qualified roadway worker is not assigned to provide on-track safety for the work group, a conductor/flagman may perform this function but must have received the relevant training to assume those responsibilities (see Table 1). This would also be true of any employee that would be protecting a contractor to a railroad engaged in roadway worker functions.

The Rule does not apply to employers, or their employees, if they are not engaged by or under contract to a railroad. Personnel, who might work near railroad tracks on projects for others, such as cable installation for a telephone company or bridge construction for a highway agency, come under the jurisdiction of other Federal agencies with regard to occupational safety. However, FRA encourages on-track safety for those personnel as well.

Employees who are flagmen are required to demonstrate proficiency on a periodic basis. Inquiries about training indicate there is confusion regarding annual training and periodic qualification. The term “periodic qualification” as used in this regulation refers to employees who perform specific duties such as lone workers, watchman/lookouts, flagmen, RWICs, and roadway maintenance machine operators. FRA requires that employees receive “initial and periodic qualification” for each of the duties listed above. The required time frame for the qualification differs from the required annual training.

Although the term “periodic qualification” is not defined in the rule, each railroad should specify in its program the interval at which their periodic qualification will take place.

When an employee (with only basic training) is promoted to perform duties such as a flagman, that employee must receive additional training and be qualified as required. The qualification of the flagman is based on their demonstrated proficiency.

Note: Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency or take the recorded examination before assuming such duties.

### **§ 214.353 *Training and qualification of roadway workers who provide on-track safety for roadway work groups.***

- (a) *The training and qualification of roadway workers who provide for the on-track safety of groups of roadway workers through establishment of working limits or the assignment and supervision of watchmen/lookouts or flagmen shall include, as a minimum:*
  - (1) *All the on-track safety training and qualification required of the roadway workers to be supervised and protected.*
  - (2) *The content and application of the operating rules of the railroad pertaining to the establishment of working limits.*
  - (3) *The content and application of the rules of the railroad pertaining to the establishment or train approach warning.*
  - (4) *The relevant physical characteristics of the territory of the railroad upon which the roadway worker is qualified.*
- (b) *Initial and periodic qualification of a roadway worker to provide on track safety for groups shall be evidenced by a recorded examination.*

**Guidance.** Section 214.353 details training standards applicable to the roadway worker who is qualified to provide on-track safety for roadway work groups. This roadway worker has the most critical responsibilities under this subpart. This individual must be able to apply the proper on-track safety rules and procedures in various circumstances, to communicate with other railroad employees regarding on-track safety procedures, and to supervise other roadway workers in the performance of their on-track safety responsibilities.

If a conductor/flagman is assigned to withhold movements, that employee may authorize movements under the direction of the RWIC. If a qualified roadway worker is not assigned to provide on-track safety for the work group, a conductor/flagman may perform this function but must have received the relevant training to assume those responsibilities (see Table 1). This would also be true of any employee that would be protecting a contractor to a railroad engaged in roadway worker functions.

The Rule does not apply to employers, or their employees, if they are not engaged by or under contract to a railroad. Personnel, who might work near railroad tracks on projects for others, such as cable installation for a telephone company or bridge construction for a highway agency, come under the jurisdiction of other Federal agencies with regard to occupational safety. However, FRA encourages on-track safety for those personnel as well.

§214.353 (Qualification of workers who provide on-track safety for roadway work groups), specifies physical characteristic qualifications. The regulation requires that the roadway worker providing on-track safety must demonstrate proficiency. It is incumbent on each railroad to assure that the roadway workers providing on-track safety have the capability to properly use any form of on-track safety that a roadway worker providing on-track safety would use.

This section is unique in this subpart in requiring a recorded examination as part of the qualification process. This requirement reflects the additional responsibility of this position. The recorded examination might be written, or it might be, for example, a computer file with the results of an interactive training course.

Employees who are roadway workers providing on-track safety are required to demonstrate proficiency on a periodic basis. Inquiries about training indicate there is confusion regarding annual training and periodic qualification. The term “periodic qualification” as used in this regulation refers to employees who perform specific duties such as lone workers, watchman/lookouts, flagmen, RWICs, and roadway maintenance machine operators. FRA requires that employees receive “initial and periodic qualification” for each of the duties listed above. The required time frame for the qualification differs from the required annual training.

Although the term “periodic qualification” is not defined in the rule, each railroad should specify in its program the interval at which their periodic qualification will take place.

When an employee (with only basic training) is promoted to perform duties such as roadway worker providing on-track safety, that employee must receive additional training and be qualified as required.

**Note:** Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency or take the recorded examination before assuming such duties.

Table 1 provides a list of required training and qualification elements for employees other than roadway workers based on specific activities.

**§ 214.355 Training and qualification in on-track safety for operators of roadway maintenance machines.**

- (a) *The training and qualification of roadway workers who operate roadway maintenance machines shall include, as a minimum:*
- (1) *Procedures to prevent a person from being struck by the machine when the machine is in motion or operation.*
  - (2) *Procedures to prevent any part of the machine from being struck by a train or other equipment on another track.*
  - (3) *Procedures to provide for stopping the machine short of other machines or obstructions on the track.*
  - (4) *Methods to determine safe operating procedures for each machine that the operator is expected to operate.*
- (b) *Initial and periodic qualification of a roadway worker to operate roadway maintenance machines shall be evidenced by demonstrated proficiency.*

**Guidance.** Section 214.355 requires training for those roadway workers operating roadway maintenance machines. As noted earlier, there is a wide variety of equipment requiring specific knowledge. However, FRA determined that establishing minimum qualifications closely associated with the type of machine to be operated, and the circumstances and conditions under which it is to be operated, was necessary.

Employees who are roadway workers operating roadway maintenance machines are required to demonstrate proficiency on a periodic basis. Inquiries about training indicate there is confusion regarding annual training and periodic qualification. The term “periodic qualification” as used in this regulation refers to employees who perform specific duties such as lone workers, watchman/lookouts, flagmen, RWICs, and roadway maintenance machine operators. FRA requires that employees receive “initial and periodic qualification” for each of the duties listed above. The required time frame for the qualification differs from the required annual training.

Although the term “periodic qualification” is not defined in the rule, each railroad should specify in its program the interval at which their periodic qualification will take place.

When an employee (with only basic training) is promoted to perform duties such as roadway worker operating roadway maintenance machines, that employee must receive additional training and be qualified as required. The qualification of the roadway worker operating roadway maintenance machines is based on his/her demonstrated proficiency.

**Note:** Any employee who is promoted from a “basic worker” to a higher form of roadway worker qualification must demonstrate proficiency or take the recorded examination before assuming such duties.



**Table 1 - Training and Qualification of Employees Associated with Roadway Worker Protection**

Section	Description	Dispatcher	Engineer	Conductor	Conductor providing on-track safety (1)
309	Each RWIC shall maintain a copy of the program document				A
311	Good faith challenge and written procedure				A
315	On-track safety briefing				A
321	Exclusive track occupancy	D	D	D	D
323	Foul time	D			A
325	Train coordination		R	R	R
327	Inaccessible track			2	A
329	Train approach warning				A
335	Train approach warning large scale (adjacent track)				A
339	Audible train warning		R		A
341	Roadway maintenance machines				3
351	Flagmen	D	D	D	D
353	Physical characteristics	D	D	D	D

D Default training received through craft training.

R On-track training received in addition to craft qualification as required by 214.343.

A Additional qualification of employee providing on-track safety for roadway workers. Qualifications may be limited to those required for a specific situation. For example, a conductor providing on-track safety for a contractor working on a single controlled main track with exclusive track occupancy without roadway maintenance machines will not need to be qualified on roadway maintenance machine on-track safety, train approach warning, or inaccessible track. Only the elements that are utilized are applicable.

1. On-track safety qualification elements may be split between a conductor and roadway worker. For example, a conductor who is qualified to obtain a track permit but not on-track safety, a roadway worker may fulfill the other elements such as the on-track safety briefing, etc.
2. Railroad operating rule that would prohibit conductor from pulling spike in switch used to make track inaccessible.
3. An employee providing on-track safety is not required to be fully qualified to operate every roadway maintenance machine but must have knowledge of the general and specific on-track safety procedures for each machine.



**Appendix A – Defect Codes****Note:**

- 1) All codes correspond to the rule text. For example, 0303(a) corresponds to 214.303(a) and 0315(e)(iii) corresponds to 214.315(e)(iii).
- 2) For penalty schedule, please refer 49 CFR Part 214.
- 3) Defect code descriptions are not exact regulatory language. They are subject to change as needed.

Code	Description
0303A	FAILURE OF A RAILROAD TO IMPLEMENT AN ON-TRACK SAFETY PROGRAM.
0303B	ON-TRACK SAFETY PROGRAM OF A RAILROAD INCLUDES NO INTERNAL MONITORING PROCEDURE.
0305	FAILURE OF A RAILROAD TO COMPLY BY THE SPECIFIED DATES
0307Ai	FAILURE TO NOTIFY FRA OF ADOPTION OF ON-TRACK SAFETY PROGRAM
0307Aii	FAILURE TO DESIGNATE PRIMARY PERSON TO CONTACT FOR PROGRAM REVIEW
0309A1	ON-TRACK SAFETY MANUAL NOT PROVIDED TO PRESCRIBED EMPLOYEES
0309A2	ON-TRACK SAFETY PROGRAM DOCUMENTS ISSUED IN FRAGMENTS
0309A3	FAILURE OF ROADWAY WORKER TO MAKE ON-TRACK SAFETY MANUAL AVAILABLE
0311B	ROADWAY WORKER REQUIRED BY EMPLOYER TO FOUL A TRACK DURING AN UNRESOLVED CHALLENGE
0311C	ROADWAY WORKERS NOT PROVIDED WITH WRITTEN PROCEDURE TO RESOLVE CHALLENGES OF ON-TRACK SAFETY PROCEDURES
0313A	FAILURE OF ROADWAY WORKER TO FOLLOW RAILROADS ON-TRACK SAFETY RULES WHERE ROADWAY WORKER IS LOCATED
0313B	ROADWAY WORKER FOULING A TRACK WHEN NOT NECESSARY IN THE PERFORMANCE OF DUTY
0313C	ROADWAY WORKER FOULING A TRACK WITHOUT ASCERTAINING THAT PROVISION IS MADE FOR ON-TRACK SAFETY
0313D	ROADWAY WORKER FAILING TO NOTIFY EMPLOYER OF DETERMINATION OF IMPROPER ON-TRACK SAFETY

	PROVISIONS
0315A	FAILURE OF EMPLOYER TO PROVIDE JOB BRIEFING
0315B	INCOMPLETE JOB BRIEFING
0315Ci	FAILURE TO DESIGNATE ROADWAY WORKER IN CHARGE OF ROADWAY WORK GROUP
0315Cii	DESIGNATION OF MORE THAN ONE ROADWAY WORKER IN CHARGE OF ONE ROADWAY WORK GROUP.
0315Ciii	DESIGNATION OF NON-QUALIFIED ROADWAY WORKER IN CHARGE OF ROADWAY WORK GROUP
0315Di	FAILURE TO NOTIFY ROADWAY WORKERS OF ON-TRACK SAFETY PROCEDURES IN EFFECT.
0315Dii	INCORRECT INFORMATION PROVIDED TO ROADWAY WORKERS REGARDING ON-TRACK SAFETY PROCEDURES IN EFFECT.
0315Diii	FAILURE TO NOTIFY ROADWAY WORKERS OF CHANGE IN ON-TRACK SAFETY PROCEDURES.
0315Ei	FAILURE OF LONE WORKER TO COMMUNICATE WITH DESIGNATED EMPLOYEE FOR DAILY JOB BRIEFING.
0315Eii	FAILURE OF EMPLOYER TO PROVIDE MEANS FOR LONE WORKER TO RECEIVE DAILY JOB BRIEFING
0317A	EMPLOYER FAILED TO COMPLY WITH ON-TRACK SAFETY PROGRAM PROVISIONS FOR PROTECTING ROADWAY WORKERS
0317B	ON-TRACK SAFETY RULES CONFLICT WITH THIS PART
0319A	NON-QUALIFIED ROADWAY WORKER IN CHARGE OF WORKING LIMITS
0319B	MORE THAN ONE ROADWAY WORKER IN CHARGE OF WORKING LIMITS ON THE SAME TRACK SEGMENT
0319C1	WORKING LIMITS RELEASED WITHOUT NOTIFYING ALL AFFECTED ROADWAY WORKERS
0319C2	WORKING LIMITS RELEASED BEFORE ALL AFFECTED ROADWAY WORKERS ARE OTHERWISE PROTECTED
0321B	IMPROPER TRANSMISSION OF AUTHORITY FOR EXCLUSIVE TRACK OCCUPANCY.
0321B1	FAILURE TO REPEAT AUTHORITY FOR EXCLUSIVE TRACK OCCUPANCY TO ISSUING EMPLOYEE.
0321B2	FAILURE TO RETAIN POSSESSION OF WRITTEN AUTHORITY FOR EXCLUSIVE TRACK OCCUPANCY.
0321B3	FAILURE TO RECORD AUTHORITY FOR EXCLUSIVE TRACK OCCUPANCY WHEN ISSUED.

0321C	LIMITS OF EXCLUSIVE TRACK OCCUPANCY NOT IDENTIFIED BY PROPER PHYSICAL FEATURES.
0321D1	MOVEMENT AUTHORIZED INTO LIMITS OF EXCLUSIVE TRACK OCCUPANCY WITHOUT AUTHORITY OF ROADWAY WORKER IN CHARGE
0321D2	MOVEMENT AUTHORIZED WITHIN LIMITS OF EXCLUSIVE TRACK OCCUPANCY WITHOUT AUTHORITY OF ROADWAY WORKER IN CHARGE
0321D3	MOVEMENT WITHIN LIMITS OF EXCLUSIVE TRACK OCCUPANCY EXCEEDING RESTRICTED SPEED WITHOUT AUTHORITY OF ROADWAY WORKER IN CHARGE
0323A	FOUL TIME AUTHORITY OVERLAPPING MOVEMENT AUTHORITY OF TRAIN OR EQUIPMENT
0323B	FAILURE TO REPEAT FOUL TIME AUTHORITY TO ISSUING EMPLOYEE
0325A	TRAIN COORDINATION LIMITS ESTABLISHED WHERE MORE THAN ONE TRAIN IS AUTHORIZED TO OPERATE
0325B1	TRAIN COORDINATION ESTABLISHED WITH TRAIN NOT VISIBLE TO ROADWAY WORKER AT THE TIME
0325B2	TRAIN COORDINATION ESTABLISHED WITH MOVING TRAIN
0325B3	COORDINATED TRAIN MOVING WITHOUT AUTHORITY OF ROADWAY WORKER IN CHARGE
0325B4	COORDINATED TRAIN RELEASING MOVEMENT AUTHORITY WHILE WORKING LIMITS ARE IN EFFECT
0327A	IMPROPER CONTROL OF ENTRY TO INACCESSIBLE TRACK
0327A5	REMOTELY CONTROLLED SWITCH NOT PROPERLY SECURED BY CONTROL OPERATOR
0327B	TRAIN OR EQUIPMENT MOVING WITHIN INACCESSIBLE TRACK LIMITS WITHOUT PERMISSION OF ROADWAY WORKER IN CHARGE
032707	UNAUTHORIZED TRAIN OR EQUIPMENT LOCATED WITHIN INACCESSIBLE TRACK LIMITS
0329A	FAILURE TO GIVE TIMELY WARNING OF APPROACHING TRAIN
0329B1	FAILURE OF WATCHMAN/LOOKOUT TO GIVE FULL ATTENTION TO DETECTING APPROACH OF TRAIN
0329B2	ASSIGNMENT OF OTHER DUTIES TO WATCHMAN/LOOKOUT
0329C	FAILURE TO PROVIDE PROPER WARNING SIGNAL DEVICES
0329D	FAILURE TO MAINTAIN POSITION TO RECEIVE TRAIN APPROACH WARNING SIGNAL

0329E	FAILURE TO COMMUNICATE PROPER WARNING SIGNAL
0329F1	ASSIGNMENT OF NON-QUALIFIED PERSON AS WATCHMAN/LOOKOUT
0329F2	NON-QUALIFIED PERSON ACCEPTING ASSIGNMENT AS WATCHMAN/LOOKOUT
0329G	FAILURE TO PROPERLY EQUIP A WATCHMAN/LOOKOUT
0331A	DEFINITE TRAIN LOCATION ESTABLISHED WHERE PROHIBITED
0331B	FAILURE TO PHASE OUT DEFINITE TRAIN LOCATION BY REQUIRED DATE
0331D1	TRAIN LOCATION INFORMATION ISSUED BY UNAUTHORIZED PERSON
0331D2	FAILURE TO INCLUDE ALL TRAINS OPERATED ON TRAIN LOCATION LIST
0331D5	FAILURE TO CLEAR A TRAIN BY TEN MINUTES AT THE LAST STATION AT WHICH TIME IS SHOWN
0331D6	TRAIN PASSING STATION BEFORE TIME SHOWN IN TRAIN LOCATION LIST
0331D7	NON-QUALIFIED PERSON USING DEFINITE TRAIN LOCATION TO ESTABLISH ON-TRACK SAFETY
0333A	INFORMATIONAL LINE-UPS OF TRAINS USED FOR ON-TRACK SAFETY WHERE PROHIBITED
0333B	INFORMATIONAL LINE-UP PROCEDURES INADEQUATE TO PROTECT ROADWAY WORKERS
0333C	FAILURE TO DISCONTINUE INFORMATIONAL LINE-UPS BY REQUIRED DATE
0335A	FAILURE TO PROVIDE ON-TRACK SAFETY FOR A MEMBER OF A ROADWAY WORK GROUP
0335B	MEMBER OF ROADWAY WORK GROUP FOULING A TRACK WITHOUT AUTHORITY OF EMPLOYEE IN CHARGE
0335C	FAILURE TO PROVIDE TRAIN APPROACH WARNING OR WORKING LIMITS ON ADJACENT TRACK WHERE REQUIRED
0337B	FAILURE BY EMPLOYER TO PERMIT INDIVIDUAL DISCRETION IN USE OF INDIVIDUAL TRAIN DETECTION
0337C1	INDIVIDUAL TRAIN DETECTION USED BY NON-QUALIFIED EMPLOYEE
0337C2	USE OF INDIVIDUAL TRAIN DETECTION WHILE ENGAGED IN HEAVY OR DISTRACTING WORK
0337C3	USE OF INDIVIDUAL TRAIN DETECTION IN CONTROLLED POINT OR MANUAL INTERLOCKING
0337C4	USE OF INDIVIDUAL TRAIN DETECTION WITH INSUFFICIENT VISIBILITY

0337C5	USE OF INDIVIDUAL TRAIN DETECTION WITH INTERFERING NOISE
0337C6	USE OF INDIVIDUAL TRAIN DETECTION WHILE A TRAIN IS PASSING
0337D	FAILURE TO MAINTAIN ACCESS TO PLACE OF SAFETY CLEAR OF LIVE TRACKS
0337E	LONE WORKER UNABLE TO MAINTAIN VIGILANT LOOKOUT
0337F1	FAILURE TO PREPARE WRITTEN STATEMENT OF ON-TRACK SAFETY
0337F2	INCOMPLETE WRITTEN STATEMENT OF ON-TRACK SAFETY
0337F3	FAILURE TO PRODUCE WRITTEN STATEMENT OF ON-TRACK SAFETY TO FRA
0339A	FAILURE TO REQUIRE AUDIBLE WARNING FROM TRAINS
0339B	FAILURE OF TRAIN TO GIVE AUDIBLE WARNING WHERE REQUIRED
0341A	FAILURE OF ON-TRACK SAFETY PROGRAM TO INCLUDE PROVISIONS FOR SAFETY NEAR ROADWAY MAINTENANCE MACHINES
0341B	FAILURE TO PROVIDE OPERATING INSTRUCTIONS
0341B1	ASSIGNMENT OF NON-QUALIFIED EMPLOYEE TO OPERATE MACHINE
0341B2	OPERATOR UNFAMILIAR WITH SAFETY INSTRUCTIONS FOR MACHINE
0341B3	ROADWAY WORKER WORKING WITH UNFAMILIAR MACHINE
0341C	ROADWAY MAINTENANCE MACHINE NOT CLEAR OF PASSING TRAINS
0343A1	FAILURE OF RAILROAD PROGRAM TO INCLUDE TRAINING PROVISIONS
0343A2	FAILURE TO PROVIDE INITIAL TRAINING
0343B	FAILURE TO PROVIDE ANNUAL TRAINING
0343C	ASSIGNMENT OF NON-QUALIFIED RAILROAD EMPLOYEES TO PROVIDE ON-TRACK SAFETY
0343D1	FAILURE TO MAINTAIN RECORDS OF QUALIFICATIONS
0343D2	INCOMPLETE RECORDS OF QUALIFICATIONS
0343D3	FAILURE TO PROVIDE RECORDS OF QUALIFICATIONS TO FRA

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